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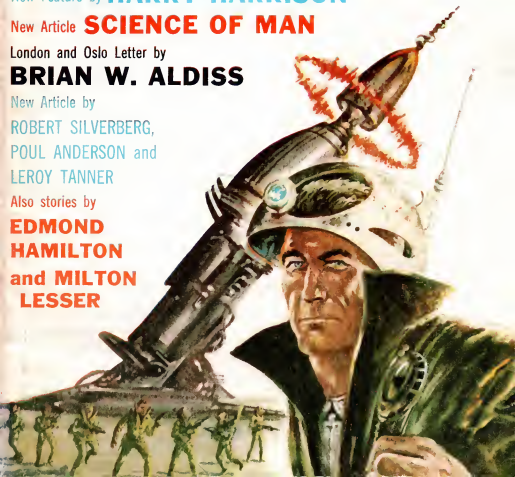
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THE FUTURE OF THE FUTURE

Editorial by Harry Harrison

Primitive science fiction—the first stories to appear in magazines with that description in, near or around the title—are SF-1. They were simple stuff for the most part, even pulpy and basic at times, but nevertheless filled with enthusiasm and ideas.

After this came SF-2, stories by what might be called the first generation of grown up-fans. They had read the literature of their choice since the cradle and lived and breathed it. Many of the old themes were re-examined and a new light cast upon their content and possibilities.

Now SF-3 is hovering in the wings and putting one delicate space boot forward. What will it be—or what is it—like?

Before any description is attempted, one fact must be made clear, then painted in large letters and tacked to the wall. There are no hard and fast dividing lines. Some writers have changed with the times—or forced the times to change with them—and have written copy that is always fresh. Other writers have stayed completely out of mainstream SF influences and gone their own way. Bully for them all. We are not talking about the exceptions now, but about the main tendencies in the field.

SF-3. This is wide open now and there are no rules. No one school is

SF-3 and no one particular style or clique is any more important than the others. They are all equal and, contrary to the ANIMAL FARM dictum, no one is more equal than the others. This situation will continue until the present becomes the past, at which time someone will say with great authority that, "This was SF-3, the major trend of the late 60's and early 70's." All we can see are the trees from where we stand now, and time shall have to remove a lot of deadwood before anyone can really be sure what happened.

Yet we can still point at some of the major tendencies, the areas of breakthrough that differ in some major degree from SF-1 and SF-2.

Inner space is of course the first. To my knowledge J.G. Ballard originated the term, though he has never clearly defined it. I almost had a definition once, came very close in fact. Jim and I were in my garden in a suburb of London on a sunny afternoon, removing all traces of the tension of life with the distillation of the malt. The conversation became heated when I insisted that he was a science fiction writer who had started his writing career in the SF magazines, whose copy was read as SF and who reviewed only SF books for one of the major British dailies. He kept insisting that he did not write science fiction and did not believe in, nor care about, rocket ships or

the bloody planet Mars. The logical question then was, "All right, what do you write?" I asked the question and leaned back. Jim leaned forward and opened his mouth . . .

And the door from the house opened and a Person from Porlock came in.

Well that took care of that. We shook hands and had drinks all around and he never did answer the question. Therefore, thinking back to our conversation, I'll attempt to answer it for him.

"Inner" space concerns itself with this world, as opposed to "outer" space with its emphasis on the rocket. But in Ballard's work he seems to busy himself with the inner space of the human mind, not the world around us. Freudian symbols and Jungian archetypes abound. In fact stories like *TERMINAL BEACH* and *DOOMED WORLD* don't make much sense at all except on a symbolical level—guilt feelings, uterine waves and the lot. Guilt is a recurrent theme in his works, so much so that a story like *END-GAME* is about nothing except guilt, and the meaning of guilt and punishment to the individual.

Therefore, I would like to suggest that "inner space" can be translated as "subjective" and is no more complex than that. Ballard is not the only one to write subjective science fiction. Both Roger Zelazny and Samuel R. Delaney have stated publicly that they start a story without knowing where the story is going, beginning to write with just a situation or a character, then writing away to see where this will lead them. This is of course the opposite

pole from the usual and classic objective SF, the what-if story and the gadget story.

An objective story is written about things that happen in the story. A subjective story is written about things that happen in the author's head. A great deal of the new wave in SF is subjective. Nor is the subjective story that new to science fiction, it is the emphasis that is new and the fact that many of the better new writers do this kind of work that is important. Though this may just be a preliminary phase in a writers development. Featured in this issue is Delaney's *HOUSE A-FIRE* which is like nothing he has ever done before—and is undoubtedly his finest work to date. His earlier experimental works seem to have given him a mastery of prose that few can equal.

Another direction in which SF can move, one I am partial to myself, is what our Dr. Stover calls the metatechnology story. This is the story that not only explores the impact of science upon people—a standard SF ploy—but also explores the usage to which science is put or not put. Aldiss's *EARTHWORKS* is a good example of this, about some of the possibilities inherent in our ignoring the laws of conservation. Heinlein's *STARSHIP TROOPER* is another, showing the degrading future that is waiting for us if we allow the military mind to control our society.

One of the worse directions that SF is moving in, and there are more examples around than I care to shake an electronic whip at, is towards total vacuity. This is the cliché

(Continued on page 144)

HOUSE A FIRE

SAMUEL R. DELANY

Illustrated by GRAY MORROW

What the mind has not experienced it cannot describe . . . That may be true for the ordinary man—but not for this writer—who takes us on a swing through the future, to the most real, most three-dimensional world ever experienced. Even though it hasn't come into existence . . . yet.

BLIND on Hell's lip, Dan squats, grasping dirty toes:

Aaron Red? Richest man on Earth. Look at any space-ship on the field. Red-shift Ltd. makes the drives that run it, the parts to replace when the old ones wear out, and the tools to put them in with. But me, I didn't work for him, I was out in the Pleiades, with Von Ray . . .

What were the first things?

His name was Lorq Von Ray and he lived at 12 Extol Park in the big house up the hill: New Ark (N.W. 73), Ark. That was what you told somebody on the street if you should get lost and that person would help you find home. The streets of Ark were set with transparent wind shields, and the evenings from the months of April to Iumbra were blasted with colored fumes that snagged, ripped free, and writhed above the city on the crags of Tong. His name was Lorq Von Ray and he lived . . . Those were the childish things, the things that persisted, the

first learned. Ark was the greatest city in the Pliades Federation. Mother and Father were important people and were often away. When they talked of the realignment, the prospect of sovereignty for the Outer Colonies. They had guests who were senator this, and representative that. After Secretary Morgan married Aunt Cyana, they came to dinner and Secretary Morgan gave him a hologram map of the Pleiades Federation that was just like a regular piece of paper, but when you looked at it under the tensor beam, you looked through a night window with lights flickering at different distances, and nebulous gases winding. "You live on Ark, the second planet of that sun there," his father said, pointing down where Lorq had spread the map over the rock table beside the glass wall. Outside, spidery tilda trees writhed in the evening gale.

"Where's Earth?"

His father laughed, loud and alone, in the dining room. "You can't see it on that map. That's just the

Pleiades Federation. "Earth is in Draco."

Morgan put his hand on the boy's shoulder. "I you a map of Draco next time bring." The secretary, whose eyes were almond shaped, smiled.

Lorq turned to his father. "I want to go to Draco!" and then back to Secretary Morgan: "I some day to Draco want to go!" Secretary Morgan spoke like many of the people in his school at *Causby*; like the people on the street who had helped him find his way home when he had gotten lost when he was four (but not like his father or Aunt Cyana) and mommy and daddy had been so terribly upset ("We were so worried! We thought you'd been kidnapped. But you mustn't go to those card players on the street, even if they did bring you back!") His parents smiled when he spoke like that to them, but they wouldn't smile now because Secretary Morgan was a guest.

His father humphed. "A map of Draco! That's all he needs. Oh yes, Draco!"

Aunt Cyana laughed; then Mother and Secretary Morgan laughed too.

They lived on Ark; but often they went on big Illyrian powered ships to other worlds. You had a cabin where you could pass your hand in front of colored panels and have anything to eat you wanted any time, or you could go down to the observation deck and watch the winds of the void translated to visible patterns of light over the bubble ceiling, flailing colors among stars that drifted by—and you knew you



were going faster and faster than anything.

Sometimes his parents went to Draco, to Earth, to cities called New York and Peking. He wondered when they would take him.

But every year, the last week in Saluary, they would take him on one of the great ships to another world that was also not on the map. It was called New Brazillia and was in the Outer Colonies. He lived in New Brazillia too, on the island of Saõ Orini, because his parents had a house there near the mine.

The first time he heard the name Prince and Ruby Red it was at the Saõ Orini house. He was lying in the dark, screaming for light.

His mother came at last, pushed away the insect netting (it wasn't needed because the house had sonics to keep away the tiny red bugs that occasionally bit you outside and made you feel funny for a few hours, but Mother liked to be safe). She lifted him. "Shhh! Shhh! It's all right. Don't you want to go to sleep? Tomorrow is the party. Aaron will be bringing Prince and Ruby. Don't you want to play with Prince and Ruby at the party?" She carried him around the nursery, stopping to push the wall switch by the door. The ceiling began to rotate till the polarized panes were transparent. Through the palm fronds lapping the roof, twin moons splattered orange light. She laid him back in the bed, caressed his rough, red hair. After a while she started to leave.

"Don't turn it off, Mommy!"

Her hand fell from the switch. She smiled at him. He felt warm,

and rolled over to stare through the meshed fronds at the moons.

Prince and Ruby Red were coming from Earth. He knew that his mother's parents were on Earth, in a country called Senegal. His father's great-grandparents were also from Earth, from Norway. Von Rays, blond and blustering, had been speculating in the Pleiades now for generations. He wasn't sure what they speculated, but it must have been successful. His family owned the Illyrion mine that operated just beyond the northern tip of Saõ Orini. His father occasionally joked with him about making him the little foreman of the mines. That's what "speculation" probably was. And the moons were drifting away; he was sleepy.

II

He did not remember being introduced to the blue-eyed, black-haired boy with the prosthetic right arm, nor his spindly sister. But he recalled the three of them, himself, Prince, and Ruby, playing together the next afternoon in the garden.

He showed them the private place behind the bamboo where you could climb up into the carved stone mouths.

"What are *those*?" Prince asked.

"Those are the dragons," Lorg explained.

"There aren't any dragons," Ruby said.

"Those are dragons. That's what Father says."

"Oh." Prince caught his false hand over the lip and hoisted himself up. "What are they for?"

"You climb up in them. Then you can climb down again. Father says the people who lived here before us carved them."

"Who lived here before?" Ruby asked. "And what did they want with dragons? Help me up, Prince."

"I think they're silly." Prince and Ruby were now both standing between the stone fangs above him. (Later he would learn that "the people who had lived here before" were a race extinct in the Outer Colonies for twenty thousand years; their carvings had survived, and on these ruined foundations, Von Ray had erected this mansion.) Lorq sprang for the jaw, got his fingers around the lower lip and started scrambling. "Give me a hand?"

"Just a second," Prince said. Then, slowly, he put his boot toe on Lorq's fingers and mashed.

Lorq gasped and fell back on the ground, clutching his hand.

Ruby giggled.

"Hey!" Indignation throbbed, confusion welled. Pain beat in his knuckles.

"You shouldn't make fun of his hand," Ruby said. "He doesn't like it."

"Huh?" Lorq looked at the metal and plastic claw directly for the first time. "I didn't make fun of it!"

"Yes you did," Prince said evenly. "I don't like people who make fun of me."

"But I—" Lorq's seven year old mind tried to comprehend this irrationality. He stood up again. "What's wrong with your hand?"

Prince lowered himself to his knees, reached out, and swung at Lorq's head.

"Watch—!" He leaped backward.

The mechanical limb had moved so fast the air hissed.

"Don't talk about my hand any more! There's nothing wrong! Nothing at all!"

"If you stop making fun of him," Ruby commented, looking at the rugae on the roof of the stone mouth, "He'll be friends with you."

"Well, all right," Lorq said warily.

Prince smiled. "Then we'll be friends now." He had very pale skin and his teeth were small.

"All right," Lorq said. He decided he didn't like Prince.

"If you say something like, 'let's shake on it'", Ruby said, "he'll beat you up. And he can, even though you're bigger than he is."

Or Ruby either.

"Come on up," Prince said.

Lorq climbed into the mouth beside the other two children.

"Now what do we do?" Ruby asked. "Climb down?"

"You can look into the garden from here," Lorq said. "And watch the party."

"Who wants to watch an old party," Ruby said.

"I do," said Prince.

"Oh," Ruby said. "You do. Well, all right then."

Beyond the bamboo, the guests walked in the garden. They laughed gently, talked of the latest psychorama, politics, drank from long glasses. His father stood by the fountain, discussing with several people his feelings about the proposed sovereignty of the Outer Colonies—after all, he had a home out here and had to have his finger on the pulse of the situation. It was the year that Secretary Morgan of

the Pleiades Federation had been assassinated. Though Underwood had been caught, there were still theories going around as to which faction was responsible.

A woman with silver hair flirted with a young couple who had come with Ambassador Selvin, who was also a cousin. Aaron Red, a portly, proper gentlemen, had cornered three young ladies and was pontificating on the moral degeneration of the young. Mother moved through the guests, the hem of her red dress brushing the grass, followed by the humming buffet. She paused here and there to offer canapés, drinks, and her opinion of the new realignment proposal. Now, a year after their phenomenal popular success, the *Tohu-bohu* had been accepted by the intelligentsia as legitimate music; the jarring rhythms tumbled across the lawn. A light sculpture in the corner twisted, flickered, grew with the tones.

Then Lorq's father let a booming laugh. Everyone looked. "Listen to this! Just hear what Lusuna had said to me!" He was holding the shoulder of a university student who had come with the young couple. Von Ray's bluster had apparently prompted the young man to argument. Father gestured for him to repeat.

"I only said that we live in an age where economic, political, and technological change have shattered all cultural tradition."

"My Lord," laughed the woman with silver hair, "is that *all*?"

"No, no!" Father waved his hand. "We have to listen to what the

younger generation thinks. Go on, sir."

"There's no reservoir of national, or world solidarity, even on Earth, the center of Draco. The past half dozen generations have seen such movement of peoples from world to world, there can't be any. This pseudo-interplanetary society that has replaced any real tradition, while very attractive, is totally hollow and masks an incredible tangle of decadence, scheming, corruption,—"

"Really, Lusuna," the young wife said, "your scholarship is showing." She had just taken another drink at the prompting of the woman with the silver hair.

"— and piracy."

(With the last word, even the three children crouching in the mouth of the beast could tell from the looks passing on the guests' faces Lusuna had gone too far.)

Mother came across the lawn, the bottom of her red sheath brushing back from the gilded nails of her bare feet. She held her hands out to Lusuna, smiling. "Come, let's continue this social dissection over dinner. We're having a totally corrupt mango-bongoo with untraditional *loso ye mbiji a meza*, and scathingly decadent *mpati a nsengo*." His mother always made the old Senegal dishes for parties. "And if the oven cooperates, we'll end up with dreadfully pseudo-interplanetary *tiba yoka flambé*."

The student looked around, realized he was supposed to smile, and did one better by laughing. With the student on her arm, Mother led

everyone into dinner—"Didn't someone tell me you had won a scholarship to Draco University at Centauri? You must be quite bright. You're from Earth, I gather from your accent. Senegal? Well! So am I. What city . . . ?" and Father, relieved, brushed back brass colored hair and followed everyone into the jalousied dining pavilion.

On the stone tongue, Ruby was saying to her brother, "I don't think you should do that."

"Why not?" said Prince.

Lorq looked back at the brother and sister. Prince had picked up a stone from the floor of the dragon's mouth in his mechanical hand. Across the lawn stood the aviary of white cockatoos Mother had brought from Earth on her last trip.

Prince aimed. Metal and plastic blurred.

Forty feet away, birds screamed and exploded in the cage. As one fell to the floor, Lorq could see, even at this distance blood in the feathers.

"That's the one I was aiming for." Prince smiled.

"Hey," Lorq said. "Mother's not going to . . ." He looked again at the mechanical appendage strapped to Prince's shoulder over the stump. "Say, you throw better with—"

"Watch it," Prince's black brows lowered on chipped blue glass. "I told you not to make fun of my hand, didn't I?" The hand drew back, and Lorq heard the motors—whirr, click, whirr-in wrist and elbow.

"It's not his fault he was born that way," Ruby said. "And it's impolite to make remarks about your guests. Aaron says you're all barbarians out

here anyway, doesn't he, Prince."

"That's right." He lowered his hand.

A voice came over the loudspeaker into the garden. "Children, where are you? Come in and get your supper. Hurry."

They climbed down and went out through the bamboo.

III

Lorq went to bed still excited by the party. He lay under the doubled shadows of the palms above the nursery ceiling, transparent from the night before.

A whisper: "Lorq!"

And: "Shhh! Don't be so loud, Prince."

More softly: "Lorq?"

He pushed back the netting and sat up in bed. Imbedded in the plastic floor, tigers, elephants, and monkeys glowed. "What do you want?"

"We heard them leaving through the gate." Prince stood in the nursery in his shorts. "Where did they go?"

"We want to go too," Ruby said from her brother's elbow.

"Where did they go?" Prince asked again.

"Into town." Lorq stood up and padded across the glowing menagerie. "Mommy and Daddy always take their friends down into the village when they come for the holidays."

"What do they do?" Prince leaned against the jamb.

"They go . . . well, they go into

town." Where ignorance had been, curiosity came to fill it.

"We jimmied the baby sitter," said Ruby.

"You don't have a very good one; it was easy. Everything is so old-fashioned out here. Aaron says only Pleiades barbarians could think it quaint to live out here. Are you going to take us to go see where they went?"

"Well, I . . ."

"We want to go," said Ruby.

"Don't you want to go see too?"

"All right." He had planned to refuse. "I have to put my sandals on." But childish curiosity to see what adults did when children were not about, was marking foundations on which adolescent—and later adult-consciousness, would stand.

IV

The garden whispered about the gate. The lock always opened to his hand-print during the day, but he was still surprised when it swung back now.

The road threaded into the moist night.

Past the rocks and across the water one low moon turned the mainland into a tongue of ivory lapping at the sea. And through the trees, the lights of the village went off and on like a computer checkboard. Rocks, chalky under the high, smaller moon, edged the roadway. A cactus raised spiky paddles to the sky.

As they reached the first of the town's cafés, Lorq said "hello" to one of the miners who sat at a table outside the door.

"Little Senhor." The miner nodded back.

"Do you know where my parents are?" Lorq asked.

"They came by here," he shrugged, "the ladies with the fine clothes, the men in their vests and their dark shirts. They came by, half an hour ago, an hour."

"What language is he talking?" Prince demanded.

Ruby giggled. "You understand that?"

Another realization hit Lorq; he and his parents spoke to the people of São Orini with a completely different set of words than they spoke to each other and their guests. He had learned the slurred dialect of Portuguese under the blinking lights of a hypno-teacher sometime in the fog of early childhood.

"Where did they go?" he asked again.

The miner's name was Tavo; for a month last year when the mine shut down, he had been plugged into one of the clanking gardeners that had landscaped the park behind the house. Dull grown-ups and bright children form a particularly tolerant friendship. Tavo was dirty and stupid; Lorq accepted this. But his mother had put an end to the relation when, last year, he came back from the village and told how he had watched Tavo kill a man who had insulted his ability to drink.

"Come on, Tavo. Tell me where they went?"

Tavo shrugged.

Insects beat about the illuminated letters over the café door.

Crêpe paper left from the Sovereignty Festival, blew from the awning posts. It was the anniversary of Pleiades Sovereignty, but the miners celebrated it out here both in hope for their own and for Mother and Father.

"Does he know where they went?" Prince asked.

Tavo was drinking sour milk from a cracked cup along with his rum. He patted his knee and Lorq, glanced at Prince and Ruby, sat down.

Brother and sister looked at each other uncertainly.

"You sit down too," Lorq said. "On the chairs."

They did.

Tavo offered Lorq his sour milk. Lorq drank half of it, then passed it to Prince. "You want some?"

Prince raised the cup to his mouth, then caught the smell. "You drink this?" He wrinkled his face and set the cup down sharply.

Lorq picked up the glass of rum. "Would you prefer—"

But Tavo took the glass out of his hand. "That's not for you, Little Senhor."

"Tavo, where are my parents?"

"Back up in the woods, at Alonza's."

"Take us, Tavo?"

"Why?"

"We want to go see them."

Tavo deliberated. "We can't go unless you have money." He roughed Lorq's hair. "Hey, Little Senhor, you have any money?"

Lorq took out the few coins from his pocket.

"Not enough."

"Prince, do you or Ruby have any money?"

Prince had two pounds-@sg in his shorts.

"Give it to Tavo."

"Why?"

"So he'll take us to see our parents."

Tavo reached across and took the money from Prince, then raised his eyebrows at the amount.

"Will he give this to me?"

"If you take us," Lorq told him.

Tavo tickled Lorq's stomach. They laughed. Tavo folded one bill and put it in his pocket. Then he ordered another rum and sour milk. "The milk is for you. Some for your friends?"

"Come on, Tavo, You said you'd take us."

"Be quiet," the miner said. "I'm thinking whether we should go up there. You know I must go plug in at work tomorrow morning." He tapped the socket on one wrist.

Lorq put salt and pepper in the milk and sipped it.

"I want to try some," Ruby said.

"It smells awful," said Prince. "You shouldn't drink it. Is he going to take us?"

Tavo gestured to the owner of the cafe. "Lots of people up at Alonza's tonight?"

"It's Friday night, isn't it?" said the owner.

"The boy wants me to take him up there," said Tavo, "for the evening."

"You're taking Von Ray's boy up

to Alonza's?" The owner's purple birthmark crinkled.

"His parents are up there." Tavo shrugged. "The boy wants me to take them. He told me to take them, you know? And it will be more fun than sitting here and swatting red-bugs." He bent down, tied the thongs of his discarded sandals together, and hung them around his neck. "Come on, Little Senhor. Tell the one-armed boy and the girl to behave."

At the reference to Prince's arm, Lorq jumped.

"We are going now."

But Prince and Ruby didn't understand.

"We're going," Lorq explained. "Up to Alonza's."

"What's Alonza's?"

"Is that like the places Aaron is always taking those pretty women in Peking?"

"They don't have anything out here like in Peking," Prince said. "Silly. They don't even have anything like Paris."

Tavo reached down and took Lorq's hand. "Stay close. Tell your friends to stay close too." Tavo's hand was all sweat and callous. The jungle chuckled and hissed over them.

"Where are we going?" Prince asked.

"To see Mother and Father." Lorq's voice sounded uncertain. "To Alonza's."

Tavo looked over at the word and nodded. He pointed through the trees, dappled with double moons.

"Is it far, Tavo?"

Tavo just cuffed Lorq's neck, took his hand again, and went on.

At the top of the hill, a clearing: light seeped beneath the edge of a tent. A group of men joked and drank with a fat woman who had come out for air. Her face and shoulders were wet. Her breasts gleamed before falling under the orange print. She kept twiddling her braid.

"Stay," whispered Tavo. He pushed the children back.

"Hey, why—"

"We have to stay here," Lorq translated for Prince who had stepped forward after the miner.

Prince looked around, then came back and stood by Lorq and Ruby.

Joining the men, Tavo intercepted the rafia covered bottle as it swung from arm to arm. "Hey, Alonza, are the Senhores Von Ray—" He thumbed toward the tent.

"Sometimes they come up. Sometimes they bring their guests with them," Alonza said. "Sometimes they like to see—"

"Now," Tavo said, "Are they here now?"

She took the bottle and nodded.

Tavo turned and beckoned the children.

Lorq, followed by the wary siblings, went to stand beside him. The men went on talking in blurry voices that undercut the shrieks and laughter from the tarpulin. The night was hot. The bottle went around three more times. Lorq and Ruby got some. And the last time Prince made a face, but drank too.

Finally Tavo pushed Lorq's shoulder. "Inside."

Tavo had to duck under the low door. Lorq was the tallest of the

children and the top of his head just brushed the canvas.

A lantern hung from the center pole: harsh glare on the roof, harsh light in the shell of an ear, on the rim of nostrils, on the lines of old faces. A head fell back in the crowd, expelling laughter and expletives. A wet mouth glistened as a bottle neck dropped. Loose, sweaty hair. Over the noise, somebody was ringing a bell. Lorq felt excitement tingling in his palms.

People began to crouch. Tavo squatted. Prince and Ruby did too. So did Lorq, but he held on to Tavo's wet collar.

In the pit, a man in high boots tramped back and forth, motioning the crowd to sit.

On the other side, behind the rail, Lorq suddenly recognized the silver coifed woman. She was leaning on the shoulder of the Senegalese student, Lusuna. Her hair stuck to her forehead like knives. The student had opened his shirt. His vest was gone.

The pitman shook the bell rope again. A piece of down had fallen on his gleaming arm and adhered, even as he waved and shouted at the crowd; now he rapped his brown fist on the tin wall for silence.

Money was wedged between the boards of the rail. The wagers were jammed between the planks. As Lorq looked along the rail, he saw the young couple further down. He was leaning over, trying to point out something to her.

The pitman stamped across the mash of scales and feather. His boots were black to the knees.

When the people were nearly quiet, he went to the near side of the pit where Lorq couldn't see, bent down—

A cage door slammed back. With a yell, the pitman vaulted onto the fence and grabbed the center post. The spectators shouted and surged up. Those squatting began to stand. Lorq tried to push forward.

Across the pit, Lorq saw his father rise, streaming face twisted below blond hair; Von Ray shook his fist toward the arena. Mother, hand at her neck, pressed against him. Ambassador Selvin was trying to push between two miners shouting at the rail.

"There's Aaron!" Ruby exclaimed. "No!" from Prince.

But now there were so many people standing, Lorq could no longer see. Tavo stood up and began to shout for people to sit, till someone passed him a bottle.

Lorq moved left to see; then right when left was blocked. Unfocused excitement pounded in his chest.

The pitman stood on the railing above the crowd. When he jumped, his shoulder had struck the lantern so that shadows staggered on the canvas. Leaning against the pole, he frowned at the swaying light, rubbed his bicep. He noticed the fluff. Carefully he pulled it off, then began to search his matted chest, his arms. Finding nothing, he scratched his neck and leaned against the pole.

The noise exploded at the pit's edge, halted, then roared. Somebody was waving a vest in the air.

Excited, fascinated, at the same time Lorq was slightly ill with the

rum and the stench. "Come on," he shouted to Prince, "let's go up where we can see!"

"I don't think we ought to," Ruby said.

"Why not!" Prince took a step forward. But he looked scared.

Lorq barged ahead of him.

Then someone caught him by the arm and he whirled around. "What are you doing out here?" Von Ray, angry and confused, was breathing hard. "Who told you you could bring those children up here!"

Lorq looked around for Tavo. Tavo was not there.

Aaron Red came up behind his father. "I told you we should have left somebody with them. Your baby sitters are so old-fashioned out here. Any clever child could fix it!"

Von Ray turned briskly. "Oh, the children are perfectly all right. But Lorq knows he's not supposed to go out in the evening by himself!"

"I'll take them home," Mother said, coming up. "Don't be upset, Aaron. They're all right. I'm terribly sorry, really I am." She turned to the children. "Whatever possessed you to come out here?"

The miners had gathered to watch.

Ruby began to cry.

"Dear me, now what's the matter?" Mother looked concerned.

"There's nothing wrong with her," Aaron Red said. "She knows what's going to happen when I get her home. They know when they do wrong."

Ruby, who hadn't thought about what was going to happen at all, began to cry in earnest.

"Why don't we talk about this tomorrow morning?" Mother cast Von

Ray a despairing glance. But Father was too upset by Ruby's tears and chagrined by Lorq's presence to respond.

"Yes, you take them home, Dana." He looked up to see the miners watching. "Take them home now. Come, Aaron, you needn't worry yourself."

"Here," Mother said. "Ruby, Prince, give me your hands. Come, Lorq, we're going right—"

Mother had extended her hands to the children.

Then Prince reached with his prosthetic arm, and yanked—

Mother screamed, staggered forward, beating at his wrist with her free hand. Metal and plastic fingers locked her own.

"Prince!" Aaron reached for him, but the boy ducked away, twisted, then dodged across the floor.

Mother went to her knees on the dirt floor, gasping, letting tiny sobs.

Father caught her by the shoulders. "Dana! What did he do? What happened?"

Mother shook her head.

Prince ran straight against Tavo.

"Catch him!" Father shouted in Portuguese.

And Aaron bellowed, "Prince!"

At the word, resistance left the boy; he sagged in Tavo's arms, face white.

Mother was on her feet, now, grimacing on Father's shoulder . . . and one of my white birds . . . Lorq heard her say.

"Prince, come here!" Aaron commanded.

Prince walked back, his movements jerky and electric.

"Now," Aaron said. "You go back

to the house with Dana. She's sorry she mentioned your hand. She didn't mean to hurt your feelings."

Mother and Father looked at Aaron, astounded. Aaron Red turned to them. He was a short man. The only thing red about him Lorq could see were the corners of his eyes. "You see," Aaron looked tired. "I never mention his deformity. Never." He looked upset. "I don't want him to feel inferior. I don't let anyone point him out as different at all. You must never talk about it in front of him, you see. Not at all."

Father started to say something. But the initial embarrassment of the evening had been his.

Mother looked back and forth between the two men, then at her hand. It was cradled in her other palm, and she made stroking motions. "Children," she said. "Come with me."

"Dana, are you sure that you're—"

Mother cut him off with a look. "Come with me, children," she repeated. They left the tent.

Tavo was outside. "I go with you, Senhora. I will go back to the house with you, if you wish."

"Yes, Tavo," Mother said. "Thank you." She held her hand against the stomach of her dress.

"That boy with the iron claw." Tavo shook his head. "And the girl, and your son. I brought them here, Senhora. But they asked me to, you see. They told me to bring them here."

"I understand," Mother said.

They didn't go down through the jungle this time, but took the wider road that led past the launch from where the aquaturbs took the miners

to the undersea mines. The high forms swayed in the water, casting double shadows on the waves.

As they reached the gate of the park, Lorq was suddenly sick to his stomach. "Hold his head, Tavo," Mother instructed. "See, this excitement isn't good for you, Lorq. And you were drinking that milk again. Do you feel any better?"

He hadn't mentioned the rum. The smell in the tent, as well as the odor that lingered around Tavo kept his secret. Prince and Ruby watched him quietly, glancing at one another.

Upstairs Mother got the sitter back in order, and secured Prince and Ruby in their room. Finally she came into the nursery.

"Does your hand still hurt, Mommy?" he asked from the pillow.

"It does. Nothing's broken, though I don't know why not. I'm going to get the medico-unit soon as I leave you."

"They wanted to go!" Lorq blurted. "They said they wanted to see where you all had gone."

Mother sat down on the bed and began to rub his back with her good hand. "And didn't you want to see too, just a little bit?"

"Yes," he said, after a moment.

"That's what I thought. How does your stomach feel? I don't care what they say, I still don't see how that sour milk could be any good for you."

He still hadn't mentioned the rum.

"You go to sleep now." She went to the nursery door.

He remembered her touching the switch.

He remembered a moon darkening through the rotating roof.

Lorq always associated Prince Red with the coming and going of light.

He was sitting in a bathing suit by the swimming pool on the roof, reading for his petrology exam, when the purple leaves at the rock entrance shook. The skylight hummed with the gale outside; the towers of Ark, veined to glide in the wind, were distorted behind the glittering frost.

"Dad!" Lorq snapped off the reader and stood up. "Hey, I came in third in senior mathematics. Third!"

Von Ray, in fur-rimmed parka stepped through the leaves. "And I suppose you call yourself studying now. Wouldn't it be easier in the library? How can you concentrate up here with all this distraction?"

"Petrology," Lorq said, holding up his note-recorder. "I don't really have to study for that. I've got honours already."

Only in the last few years had Lorq learned to relax under his parent's demand for perfection. Having learned, he had discovered that the demands were ritual and phatic, and gave way to communication if they were allowed to ride out.

"Oh," his father said. "You did." Then he smiled. The frost on his hair turned to water as he unlaced his parka. "At least you've been studying instead of crawling through the bowels of *Caliban*."

"Which reminds me, Dad. I've registered her in the New Ark Regatta. Will you and Mother go up to see the finish?"

"If we can. You know Mother hasn't been feeling too well recently.

This past trip was a little rough. And you worry her with your racing."

"Why? I haven't let it interfere with my schoolwork."

Von Ray shrugged. "She thinks it's dangerous." He laid the parka over the rock. "We read about your prize at Trantor last month. Congratulations. She may worry about you, but she was as proud as a partridge when she could tell all those stuffy club women the first-prize winner was her son."

"I wish you'd been there."

"We wanted to be. But there was no way to cut a month off the tour. Come, I've got something to show you."

Lorq followed his father along the stream that curled from the pool. Von Ray put his arm around his son's shoulder as they started the steps that dropped beside the waterfall into the house. At their weight, the steps began to escalate.

"We stopped on Earth, this trip. Spent a day with Aaron Red. I believe you met him a long time ago. Red-shift, Ltd.?"

"Out on New Brazillia," Lorq said. "At the mine."

"Do you remember that far back?" The stairs flattened and carried them across the conservatory. Cockatoos sprung from the brush, beat against the transparent wall where snow lay outside the bottom panes, then settled in the maroon blood-flowers, knocking petals to the sand. "Prince was with him. A boy your age, perhaps a little older." Lorq had been vaguely aware of Prince's doings over the years as any child is aware of activity of the children of his parents' friends. Sometime back, Prince

had changed schools four times very rapidly, and the rumor that had filtered to the Pleiades was that only the fortunes of Red-shift, Ltd., kept the transfers from being openly labeled expulsion.

"I remember him," Lorq said. "He only had one arm."

"He wears a black glove to the shoulder with a jewelled armband at the top, now. He's a very impressive young man. He said he remembered you. You two got into some mischief or other back then. He, at least, seems to have quieted down some."

Lorq shrugged from under his father's arm and stepped onto the white rugs that scattered the winter garden. "What do you want to show me?"

Father went to one of the viewing columns. It was a transparent column. It was a transparent column four feet thick supporting the clear roofing with a capital of floral glass. "Dana, do you want to show Lorq what you brought for him?"

"Just a moment." His Mother's figure formed in the column. She was sitting in the swan chair. She took a green cloth from the table beside her and opened it on the quilted brocade of her lap.

"They're beautiful!" Lorq claimed. "Where did you find heptodyne quartz?"

The stones, basically silicon, had been formed at tremendous geological pressures so that in each crystal, about the size of a child's fist, light flowed along the shattered blue lines within the jagged forms.

"I picked them up when we stopped at Cygnus. We were staying near the Exploding Desert of Krall. We



could see it flashing from our hotel window beyond the walls of the city. It was quite as spectacular as it's always described. One afternoon when your father was off on business, I took the tour. When I saw them, I thought of your collection and bought these for you."

"Thanks." He smiled at the figure in the column.

Neither he nor his father had seen his mother in person for four years. Victim of a degenerative mental and physical disease that often left her totally incommunicative, she had retired to her suite in the house with her medicines, her diagnostic computers, her cosmetics, her gravothermy and reading machines. She—or more often one of her androids programmed to her general response pattern—would appear in the viewing columns and present a semblance of her normal appearance and personality. In the same way, through android and telerama report, she "accompanied" Von Ray on his business travels, while her physical presence was confined in the masked, isolate chambers that no one was allowed to enter except the psychotechnician who came quietly once a month.

"They're beautiful," he repeated, stepping closer.

"I'll leave them in your room this evening." She picked one up with dark fingers and turned it over. "I find them fascinating myself. Almost hypnotic."

"Here," Von Ray turned to one of the other columns. "I have something else to show you. Aaron had apparently heard of your interest in racing, and knew how well you were

doing." Something was forming in the second column. "Two of his engineers had just developed a new ion-coupler. They told us it was too sensitive for commercial use and wouldn't be profitable for them to manufacture on any large scale. But Aaron said the response level would be excellent for small scale racing craft. I offered to buy it for you. He wouldn't hear of it; he's sent it to you as a gift."

"He did?" Lorq felt excitement lap above surprise. "Where is it?"

In the column a crate stood on the corner of a loading platform. The fence of Nea Limani Yacht Basin diminished in the distance between the guide towers. "Over at the field?" Lorq sat down in the green hammock hanging from the ceiling. "Good! I'll look at it when I go down this evening. I still have to get a crew for the race."

"You just pick your crew from people hanging around the space-field?" Mother shook her head. "That always worries me."

"Mom, people who like racing, kids who are interested in racing ships, people who know how to sail, they hang around the ship yards. I know half the people at Nea Limani anyway."

"I still wish you'd get your crew from among your school friends, or people like that."

"What wrong is with people who like this talk?" He smiled slightly.

"I didn't say anything of that nature at all. I just meant you should use people you know."

"After the race," his father cut in, "what do you intend to do with the rest of your vacation?"

Lorq shrugged. "Do you want me to foreman out at the Saõ Orini mine like last year?"

His father's eyebrows separated, then snarled over the vertical crevices above his nose. "After what happened with that miner's daughter—?" The brows unsnarled again. "Do you want to go out there again?"

Lorq shrugged once more.

"Have you thought of anything that you'd like to do?" This from his mother.

"Ashton Clark will send me something. Right now I've got to go pick up my crew." He stood up from the hammock. "Mom, thanks for the stones. We'll talk about vacation when school is really over."

He started for the bridge that arched the water.

"You won't be too —"

"Before midnight."

"Lorq. One more thing."

He stopped at the crest of the bridge, leaning on the aluminum banister.

"Prince is having a party. He sent you an invitation. It's at Earth, Paris, on the Ile St. Louis. But it's just three days after the Regatta. You wouldn't be able to get there —"

"*Caliban* can make Earth in three days."

"No, Lorq! You're not going to go all the way to Earth in that tiny —"

"I've never been to Paris. The last time I was on Earth was the time you took me when I was fifteen and we went to Peking. It'll be easy sailing down into Draco." Leaving, he called back to them, "If I don't get my crew, I won't even get back to school next week." He disappeared down the other side of the bridge.

His crew was two boys who volunteered to help him unpack the ion-coupler. Neither one was from the Pleiades Federation. Brian, a boy Lorq's age who had taken a year off from Draco University and flown out to the Outer Colonies, was now working his way back; he had done both captaining and studding on racing yachts but only in the cooperative yachting club sponsored by his school. Based on common interest in racing ships, their relation was one of mutual awe. Lorq was silently agape at the way Brian had taken off to the other end of the galaxy and was beating his way without funds or forethought: while Brian had at last met, in Lorq, one of the mythically wealthy who could own his own boat and whose name had, till then, been only an abstraction on the sports tapes—Lorq Von Ray, one of the youngest and most spectacular of the new crop of racing captains.

Dan, who completed the crew of the little three-veined racer, was a man in his forties, from Australia on Earth. They had met him in the bar where he had started a whole series of tales about his times as a commercial stud on the big transport freighters, as well as racing captains he had occasionally crewed for—though he had never captained himself. Barfoot, a rope around pants torn off at the knees, Dan was a lot more typical of the studs that hung around the heated walkways of Nea Limani. The high wind-domes broke the hurricane gusts that rolled from Tong across glittering Ark—it was

the month of lumbra when there were only three hours of daylight in the twenty-nine hour day. The mechanics, officers, and studs drank late, talked currents and racing at the bars and the sauna baths, the registration offices and the service pits.

Brian's reaction to continuing on after the race down to Earth: "Fine. Why not? I have to get back into Draco in time for vacation classes anyway."

Dan's: "Paris? That's awful close to Australia, ain't it? I got a kid and two wives in Melbourne, and I ain't so anxious for them to catch hold of me. I suppose if we don't stay too long —"

VII

When the Regatta swept past the observation satellite circling Ark, looped the inner edge of the cluster to the Dim, Dead Sister, and returned to Ark again, it was announced that *Caliban* had placed second.

"All right. Let's get out of here. To Prince's party!"

"Be careful, now . . ." His mother's voice came over the speaker.

"Give our regards to Aaron. And congratulations again, son," Father said. "If you wreck that brass butterfly on this silly trip, don't expect me to buy you a new one."

"So long, Dad."

The *Caliban* rose from among the ships clustered at the viewing station from which the spectators had come to observe the Regatta's conclusion. The fifty foot windows flashed in the starlight below them (behind one, his father and an android

of his mother stood at the railing, watching the ship pull away) and in a moment they were wheeling through the Pleiades Federation, then on toward Sol.

A day out, they lost six hours in a whirlpool nebula ("Now if you had a real ship instead of this here toy," Dan complained over the intercom, "it'd be a sneeze to get out of this thing." Lorq tuned the frequency of the scanner higher on the ion-coupler. "Point two-five down, Brian. Then catch it up fast—there!" but made up the time and then some on the Outward Tidal Drift.

A day later, and Sol was a glowing, growing light in the raging of the cosmos.

Shaped like the figure eight of a Mycenaean shield, De Blau Field tilted miles below the sweeping veins. Cargo shuttles left from here for the big star port on Neptune's second moon. The five hundred meter passenger liners glittered across the platforms. *Caliban* fell toward the inset of the yacht basin, coming down like a triple kite. Lorq sat up from the couch as the guide beams caught them. "Okay, puppets. Cut the strings." He switched off *Caliban*'s humming entrails a moment after touchdown. Banked lights died around him.

Brian hopped into the control cabin, tying his left sandal. Dan, unshaven, his vest unlaced, ambled from his projection chamber. "Guess we got here, Captain." He stopped to finger dirt between his toes. "What kind of party is this you kids are going to?"

As Lorq touched the unload but-

ton, the floor began to slant and the ribbed covering rolled back till the lower edge of the floor hit the ground. "I'm not sure," Lorq told him. "I suppose we'll all find out when we get there."

"Ohhh no," Dan drawled as they reached the bottom. "I don't go for this society stuff." They started from beneath the shadow of the hull. "Find me a bar, and just pick me up when you come back."

"If you two don't want to come," Lorq said, looking around the field, "we'll stop off for something to eat, and then you can stay here."

"I . . . well, sort of wanted to go." Brian looked disappointed. "This is as close as I'll ever get to going to a party given by Prince Red."

Lorq looked at Brian. The stocky, brown haired boy with coffee colored eyes had changed his scuffed leather work-vest for a clean one with iridescent flowers. Lorq was only beginning to realize how dazzled this young man, who had hitched across the universe, was before the wealth, visible and implied, that went with a nineteen year old who could race his own yacht and just took off to parties in Paris.

It had not occurred to Lorq to change his vest at all.

"You come on then," Lorq said. "We'll get Dan on the way back."

"Just *you* two don't get so drunk that you can't carry *me* back on board."

Lorq and Dan laughed.

Brian was staring around at the other yachts in the basin.

"Hey! Have you ever worked a tri-veined Zephyr?" He touched Lorq's arm, then pointed across to a grace-

ful, golden hull. "I bet one of those would really twirl."

"Pick-up is slow on the lower frequencies." Lorq turned back to Dan. "You make sure you get back on board by take-off time tomorrow. I'm not going to go running around looking for you."

"With me this close to Australia? Don't worry, Captain. By the by, you wouldn't get upset if I should happen to bring a lady on to the ship?" He grinned at Lorq, then winked.

"Say," Brian said. "How do those Boris-27's handle? Our club at school was trying to arrange a swap with another club that had a ten year old Boris. Only they wanted money, too."

"As long as she doesn't leave the ship with anything she didn't bring," Lorq told Dan. He turned to Brian again. "I've never been on a Boris more than three years old. A friend of mine had one a couple of years back. It worked pretty well, but it wasn't up to *Caliban*."

They walked through the gate of the landing field, started down the steps to the street, and crossed the shadow of the column of the coiled snake.

Paris had remained a more or less horizontal city. The only structures interrupting the horizon to any great extent were the Eifel Tower to their left and the spiring structure of Les Halles: seventy tiers of markets were enclosed in transparent panes, tessellated with metal scroll work—it was the focus of food and produce for the twenty-three million inhabitants of the city.

They turned up Rue de Les Astronauts past the restaurants and

hotel marquees. Dan dug under the rope around his middle to scratch his stomach, then pushed his long hair from his forehead. "Where do you get drunk around here if you're a working cyborg stud?" Suddenly he pointed down a smaller street. "There!"

At the bend of the L-shaped street was a small café-bar with a crack across the windows, *La Sidereal*. The door was closing behind two women.

"Fine," Dan drawled, and loped ahead of Lorq and Brian.

"I envy someone like that, sometimes," Brian said to Lorq, softly.

Lorq looked surprised.

"You really don't care," Brian went on, "I mean if he brings a woman on the ship?"

Lorq shrugged. "I'd bring one on."

"Oh. You must have it pretty easy with girls, especially with a racing ship."

"I guess it helps."

Brian bit at his thumbnail and nodded. "That would be nice. Sometimes I think girls have forgotten I'm alive. Probably be the same, yacht or no." He laughed. "You ever . . . brought a girl onto your ship?"

Lorq was silent a moment. Then he said, "I have three children.

Now Brian looked surprised.

"A boy and two girls. Their mothers are miners on a little Outer Colony world, New Brazillia."

"Oh, you mean you . . ."

Lorq cupped his left hand on his right shoulder, right hand on his left.

"We lead very different sorts of lives, I think," Brian said slowly, "you and I."

"That's what I was thinking." Then Lorq grinned.

Brian's smile returned uneasily. "Hold on, you there!" from behind them. "Wait!"

They turned.

"Lorq? Lorq Von Ray?"

The black glove his father had described was now a silver one. The armband high on his bicep, was set with diamonds.

"Prince?"

VIII

Vest, pants, boots were silver. "I almost missed you!" The bony face beneath the black hair was animated. "I had the field call me as soon as you got clearance at Uranus. Racing yacht, huh? Sure took your time. Oh, before I forget; Aaron told me if you did come, I should ask you to give his regards to your Aunt Cyana. She stayed with us for a weekend at the beach on Chobe's World last month."

"Thanks. I will if I see her," Lorq said. "If she was with you last month, you've seen her more recently than I have. She doesn't spend much time on Ark any more."

"CYANA . . ." Brian began. ". . . Morgan?" he finished in astonishment. But Prince was already going on: "Look," he dropped his hands on the shoulders of Lorq's leather vest. (Lorq tried to detect a difference in pressure between gloved and ungloved fingers), "I've got to get to Mt. Kenyuna and back before the party. I've got every available bit of transportation bringing people down from all over everywhere. Aaron's not cooperating. He's refused to have anything more to do with the party; he thinks it's gotten out of hand. I'm afraid I've been throwing his name around, to get

things I needed, a few places he didn't approve. But he's somewhere off on Vega. Do you want to run me over to the Himalayas?"

"All right," Lorq started to suggest that Prince stud with Brian. But perhaps with his arm Prince might not be able to plug in properly. "Hey, Dan!" he shouted down the street. "You're still working."

The Australian had just opened the door. Now he turned around, shook his head, and started back.

"What are we going for?" Lorq asked as they started back toward the field.

"Tell you on the way."

As they passed the gate (and the Draco column ringed with serpent, gleaming under sunset), Brian hazarded conversation. "That's quite an outfit," he said to Prince.

"There'll be a lot of people on the Ile. I want everybody to be able to see where I am."

"Is that glove something new they're wearing here on Earth?"

Lorq's stomach caught itself. He glanced quickly between the two boys.

"Things like that," Brian went on, "they never get out to Centauri till a month after everybody's stopped wearing them on Earth. And I haven't been in Draco for ten months anyway."

Prince looked at his arm, turned his hand over.

Twilight washed the sky. Just then lights along the top of the fence flicked on: light twisted in the folds of Prince's glove.

"My personal style." He looked up at Brian. "I have no right arm. This—" he made a fist in his silver glove, "is all metal and plastic and whir-

ring doo-hickeys." He laughed sharply. "But it serves me about as well as a real one."

"Oh." Embarrassment wavered through Brian's voice. "I didn't know."

Princl laughed. "Sometimes I . . . almost forget too. Which way is your ship?"

"There." As Lorq pointed, he was acutely aware of the dozen years between his and Prince's first and present meetings.

"All plugged?"

"You're paying me, Captain," Dan's voice grated through. "Strung up and out."

"Ready, Captain," from Brian.

"Open your low veins—"

Prince sat behind Lorq, one hand on Lorq's shoulder (his real hand). "Everybody and his brother is coming to this thing. You just got here tonight, but people have been arriving all week. I invited a hundred people. There're at least three hundred coming. It grows, it grows!" As the inertia field caught them up, De Blau dropped, and the sun, which had set, suddenly rose in the west, crescented the world with fire, and flamed blue rim. "Anyway, Che-ong brought a perfectly wild bunch with her from somewhere on the edge of Draco—"

Brian's voice came over the speaker. "Che-ong? You mean the psychorama star?"

"The studio gave her a week's vacation, so she decided to come to my party. Day before yesterday, she took it into her head to go mountain climbing, and flew off to Nepal."

The sun passed overhead. To travel between two points on one planet, you just had to go up and come down

in the right place. In a vein projector craft, you had to ascend, circle the Earth three or four times, and glide in. It took the same seven/eight minutes to get from one side of the city to the other as it did to get to the other side of the world.

"Che radioed me this afternoon they were stuck three quarters of the way up Mt. Kenyuna. There's a storm below them so they can't get through to the rescue station in Katmandu for a helicopter to come and pick them up. Of course, the storm doesn't stop her from getting a third of the way around the world to tell me her troubles. Anyway, I promised her I'd think of something."

"How the hell are we supposed to get them off the mountain?"

"You fly within twenty feet of the rock face and hover. Then I'll climb down and bring them up."

"Twenty feet!" The blurred world slowed beneath them. "You want to get to your party alive?"

"Did you get that ion-coupler Aaron sent?"

"I'm using it now."

"It's supposed to be sensitive enough for that sort of maneuvering. And you're a crack racing captain. Yes or no?"

"I'll try it," Lorq said warily. "I'm a bigger fool than you are." Then he laughed. "We'll try it, Prince!"

Reticulations of snow and rock glided under them. Lorq set the loran coordinates of the mountain as Prince had given them. Prince reached by Lorq's arm and tuned the radio. A girl's voice tumbled into the cabin.

"—Oh, there! Look, do you think that's them? Prince! Prince, darling, have you come to rescue us? We're

hanging here by our little frozen nubs just miserable. Prince—?" There was music behind her voice; there was a babble of other voices.

"Hold on, Che," Prince said into the mike. "Told you we'd do something." He turned to Lorq. "There! They should be right down there."

Lorq cut the frequency filter till *Caliban* was sliding down the gravitational distortion of the mountain itself. The peaks rose, chiselled and flashing.

"Oh, look, everybody! Didn't I tell you Prince wouldn't let us languish away up here and miss the party?"

And in the background:

"Oh, Cecil, I can't do that step—"

"Turn the music up louder—"

"But I don't like anchovies—"

"Prince," cried Che, "do hurry! It's started to snow again. You know this would never have happened, Cecil, if you hadn't decided to do parlor tricks with the hobenstocks."

"Come on, sweetheart, let's dance!"

"I told you, no! We're too close to the edge!"

Below Lorq's feet, on the floor screen, transmitting natural light, ice and gravel and boulders shone in the moonlight as the *Caliban* lowered.

"How many of them are there?" Lorq asked. "This ship isn't too big."

"They'll squeeze."

On the icy ledge that slipped across the screen, some where seated on a green poncho with wine bottles, cheeses, and baskets of food. Some were dancing. A few sat around on canvas chairs. One had scrambled to a higher ledge and was shading his eyes, staring up at the ship.

"Che," Prince said, "we're here."

Get everything packed. We can't wait around all day."

"Good heavens! That is you up there. Come on, everybody, we're on our way! Yes, that's Prince!"

There was an explosion of activity on the ledge. The youngsters began to run about, picking things up, putting them in knapsacks; two people were folding the poncho.

"Edgar! Don't throw that away! It's from 'forty-eight, and you can't just pick up a bottle any old where. Yes, Hillary, you *may* change the music. No! Don't turn the heater off yet! Oh, Cecil, you *are* a fool. Brrrr!—well, I suppose we'll be off in a moment or two. Of course, I'll dance with you, honey. Just not so close to the edge. Just a second, Prince? Prince!"

"Che!" Prince called as Lorq settled still closer. "Do you have any rope down there?" He put his hand over the mike. "Did you see her in *Mayham's Daughters* where she acted the wacky, sixteen year old daughter of the botanist?"

Lorq nodded.

"That wasn't acting." He took his hand from the mike again. "Che! Rope! Do you have any rope?"

"Oodles! Edgar, where's all that rope? But we climbed up here on *something*! There it is! Now, what do I do?"

"Tie big knots in it every couple of feet. How far are we above you?"

"Forty feet? Thirty feet? Edgar! Cecil! José! You heard him. Tie knots!"

On the floor screen Lorq watched the shadow of the yacht slip over the bergs; he let the boat fall even lower.

"Lorq, open the hatch in the drive-room when we're—"

"We're seventeen feet above them," Lorq called over his shoulder. "That's it, Prince!" He reached forward. "And it is open."

"Fine!"

Prince ducked through the doorway into the drive-room. Cold air slapped Lorq's back. Dan and Brian held the ship steady in the wind.

On the floor screen Lorq saw one of the boys fling the rope up at the ship—Prince would be standing in the open hatchway to catch it in his silver glove. It took three tries. Then Prince's voice came back over the wind: "Right! I've got it tied. Come on up!" And one after another they mounted the knotted rope.

"There you go. Watch it—"

"Man, it's cold out there! Soon as you get past the heating field—"

"I've got you. Right in—"

"Didn't think we'd make it. Hey, you want some Chateaufort du Pape '48? Che says you can't get—"

The voices filled the drive-room. Then:

"Prince! Luscious of you to rescue me! Are you going to have any nineteenth century Turkish music at your party? We couldn't get any local stations, but there was this educational program beaming up from New Zealand. Airy! Edgar invented a new step. You get down on your hands and knees and just swing your up and down. José, don't fall back onto that silly mountain! Come in here this instant and meet Prince Red. He's the one who's giving the party, and his father has ever so many more millions than yours. Close the door now and let's get out of the engine room. All these machines and things. It isn't me."

"Come inside, Che, and annoy the

captain a while. Do you know Lorq Von Ray?"

"My goodness, the boy wo's winning all those races? Why, he's got even more money than your—"

"Shhhhhh!" Prince said in a stage whisper as they came into the cabin. "I don't want *him* to know."

Lorq pulled the ship away from the mountain, then turned.

"You *must* be the one who won those prizes: You're so handsome!"

Che-ong wore a completely transparent cold suit.

"Did you win them with this ship?"

She looked around the cabin, still panting from the climb up the rope and her rouged nipples flattened against the vinyl with each breath.

"This is lovely. I haven't been on a yacht in days."

And the crowd surged in behind her:

"Doesn't anybody want any of this '48—"

"I can't get any music in here. Why isn't there any music—"

"Cecil, do you have any more of that gold powder?"

"We're above the ionosphere, stupid, and electromagnetic waves aren't reflected anymore. Besides, we're moving too—"

Che-ong turned to them all. "Oh, Cecil, where has that marvelous golden dust got to? Prince, Lorq, you must try this. Cecil is the son of a mayor—"

"Governor—"

"—on one of those tiny worlds we're always hearing about, very far away. He had this gold powder that they collect from crevices in the rocks. Oh, look, he's still got lots and lots!"

The world began to spin beneath them.

"See, Prince, you breathe it in, like this. Ahhhh! It makes you see the most marvelous colors in everything you look at and hear the most incredible sounds in everything you hear, and your mind starts running about and filling in absolutely paragraphs between each word. Here, Lorq—"

"Watch it!" Prince laughed. "He's got to get us back to Paris!"

"Oh!" exclaimed Che, "it won't bother him. We'll just get there a little faster, that's all."

Behind them the others were saying:

"Where did she say this god-damn party was?"

"Ile St. Louis. That's in Paris."

"Where—?"

"Paris, baby, Paris. We're going to a party in—"

IX

In the middle of the fourth century the Byzantine Emperor Julian, tiring of the social whirl of the *Cité de Paris* (whose population, then under a thousand, dwelt mostly in skin huts clustered about a stone and wooden temple sacred to the Great Mother) moved across the water to the smaller island.

In the first half of the twentieth century, the queen of a worldwide cosmetic industry, to escape the pretensions of the right bank and the bohemian excesses of the left, established here her *pied a terre*, the walls of which were lined with a fortune in art treasures (while across the Seine, a twinned towered cathe-

dral had replaced the Mother's temple).

At the close of the thirty-first century, its central avenue hung with lights, the side alleys filled with music, menageries, drink and gaming booths, while fireworks boomed in the night, the Ile St. Louis was the scene of Prince Red's party.

"This way! Across here!"

They trooped over the trestled bridge. The black Seine glittered with Paris lights. Across the water, foliage dripped the stone balustrades. The sculptured buttresses of Notre Dame, flood lit now, rose behind the trees in the park on the Cité.

"No one can come onto my island without a mask!" Prince shouted.

As they reached the bridge's center, he vaulted to the rail, grabbed one of the beams, and waved over the crowd with his silver hand. "You're at a party! You're at Prince's party! And everybody wears a mask!" Spheres of fireworks, blue and red, bloomed on the dark behind his bony face.

"Airy!" squealed Che-ong, running to the rail. "But if I wear a mask, nobody will recognize me, Prince! The studio only said I could come if there was publicity!"

He jumped, grabbed her vinyl glove, and led her down the steps. There, on racks, hundreds of full-headed masks glared.

"But I have a special one for you, Che!" He pulled down a two-foot, transparent rat's head, ears rimmed with white-fur, eyebrows sequinned, jewels shaking at the end of each wire whisker.

"Airy!" squealed Che as Prince clapped the shape over her shoulders.

Through the transparent leer, her own green-eyed face twisted into laughter.

"Here, one for you!" Down came a saber-toothed panther's head for Cecil; an eagle for Edgar, with iridescent feathers; José's dark hair disappeared under a lizard's head.

A lion for Dan (who had come protesting at everyone's insistence, though they had forgotten him the moment he had given his belligerent consent) and a griffon for Brian (whom everyone had ignored till now, though he'd followed eagerly).

"And you!" Prince turned to Lorq. "I have a special one for you too!" Laughing, he lifted down a pirate's head, with eyepatch, bandanna, scarred cheek, and a dagger in bared teeth. It went lightly over Lorq's head: he looked out mesh eyeholes in the neck. Prince slapped him on the back. "A pirate, that's for Von Ray!" he called as Lorq started across the cobble street.

More laughter as others arrived at the bridge.

Above the crowd, girls in powdered, towering, twenty-third century, pre-Clark coiffures, tossed confetti from a balcony. A man was pushing up the street with a bear. Lorq thought it was someone in costume till the fur brushed his shoulder and he smelled the musk. The claws clicked away. The crowd caught him up.

Lorq was ears.

Lorq was eyes.

Bliss filed the reflective surface of each sense mica smooth. Perception turned suddenly in (as the veins of a ship might turn) as he walked the brick street, mortared with confetti.

He felt the presence of his centered self. His world focused on the now of his hands and tongue. Voices around him caressed his awareness.

"Champagne! Isn't that just airy!" The plastic rat had cornered the griffon in the flowered vest at the wine table. "Aren't you having fun? I just love it!"

"Sure," Brian answered. "But I've never been to a party like this. People like Lorq, Prince, you—you're the sort of people I only used to hear about. It's hard to believe you're real."

"Just between us, I've occasionally had the same problem. It's good to have you here to remind us. Now you just keep telling us—"

Lorq passed on to another group. ". . . on the cruise boat up from Port Said to Istanbul, there was this fisherman from the Pleiades who played the most marvelous things on the sensory-syrinx . . ."

". . . and then we had to hitchhike all the way across Iran because the mono wasn't working. I really think Earth is coming apart at the seams . . ."

". . . beautiful party. Perfectly airy . . ."

The very young, Lorq thought; the very rich; and wondered what limits of difference those conditions defined.

Barefoot, with a rope belt, the lion leaned against the side of a doorway, watching. "How you doing, Captain?"

Lorq raised his hand to Dan, walked on.

Now, specious and crystal, was within him. Music invaded his hollow mask where his head was cushioned on the sound of his own

breath. On a platform at a harpsichord a man was playing a Byrd pavanne. Voices in another key rose over the sound as he strolled; on a platform at the other side of the street, two boys and two girls in twentieth century mod recreated a flowing antiphonal work of the Mommas and the Poppas. Turning down a side street, he moved into a crowd that pushed him forward, till at last he confronted the towering bank of electronic instruments that were reproducing the jarring, textured silences of the *Tohu-bohu*. Responding with the nostalgia produced by ten-year old popular music, the guests, in their bloated maché and plastic heads, broke off into twos, threes, fives, and sevens to dance. A swan's head swayed to the right. Left, a frog's face wobbled on sequinned shoulders. As he moved even further, into his ear threaded the thirdless modulations that he had heard over the speaker of the *Caliban*, hovering above the Him-alayas.

They came running through the dancers. "He did it! Isn't Prince a darling!" They shouted and cavorted. "He's got that old Turkish music!"

Hips and breasts and shoulders gleaming beneath the vinyl (the material had pores that opened in warm weather to make the transparent costume cool as silk), Cheong swung around, holding her furry ears.

"Down, everybody! Down on all fours! We're going to show you our new step! Like this: just swing your —"

Lorq turned under the exploding

night, a little tired, a little excited. He crossed the street edging the island and leaned on the stone near one of the floodlights that shone back on the buildings of the Ile. Across the water on the opposite quay people strolled, in couples or singly, gazing at the fireworks or simply staring at the gaiety here.

Behind him a girl laughed sharply. He turned to her—

—head of a bird of paradise, blue feathers about red foil eyes, red beak, red rippling comb—

—as she pulled away from the group to sway against the low wall. The breeze shook the panels of her dress so that they tugged at the scrolled brass fastenings at shoulder, wrist, and thigh. She rested her hip on the stone, one sandalled toe touching the ground, one inches above it. With long arms (her nails were crimson) she removed her mask. As she set it on the wall, the breeze shook out her black hair, dropped it to her shoulders, raised it. The water reticulated below them as under flung sand.

He looked away. He looked back. He frowned.

There are two beauties (her face struck the thought in him, articulate and complete): in the first, the features and the body's lines conform to an averaged standard that will offend no one: this was the beauty of models and popular actresses; this was the beauty of Che-ong. Then there was this: her eyes were smashed disks of blue jade, her cheek bones angled high over the white hollows of her wide face. Her chin was wide, her mouth thin, red,

and wider. Her nose fell straight from her forehead to flare at the nostrils (she breathed in the wind—and watching her, he became aware of the river's odor, the Paris night, the city wind); these features were too austere and violent on the face of such a young woman. But the authority with which they set together would make him look again, he knew, once he looked away; make him remember, once he had gone away. Her face compelled in the way that makes the merely beautiful sick with jealousy.

She looked at him: "Lorq Von Ray?"

His frown deepened inside his mask.

She leaned forward, above the paving that lipped the river. "They're all so far away." She nodded toward the people on the quay. "They're so much further away than we think, or they think. What would they do at our party?"

Lorq took off his mask and placed his pirate beside her crested bird.

She glanced back at him. "So that's what you look like. You're handsome."

"How did you know who I was?" Thinking he might somehow have missed her in the crowd that had first come across the bridge, he expected her to say something about the pictures of him that occasionally appeared across the galaxy when he won a race.

"Your mask. That's how I knew."

"Really?" He smiled. "I don't understand."

Her eyebrow's arch sharpened. There were a few seconds of laughter, too soft and gone too fast.

"You. Who are you?" Lorg asked.
"I'm Ruby Red."

She was still thin. Somewhere a little girl had stood above him in the mouth of a beast—

Lorg laughed now. "What was there about my mask that gave me away?"

"Prince has been gloating over the prospect of making you wear it ever since he extended the invitation through your father and there was the faintest possibility that you would actually come. Tell me, is it politeness that makes you indulge him in his nasty prank by wearing it?"

"Everyone else has one. I thought it was a clever idea."

"I see." Her voice hung above the tone of general statement. "My brother tells me we all met a long time ago." It returned. "I . . . wouldn't have recognized you. But I remember you."

"I remember you."

"Prince does too. He was seven. That means I was five."

"What have you been doing for the last dozen years?"

"Growing older gracefully, while you've been the enfant terrible in the raceways of the Pleiades, flaunting your parents' ill gotten gains."

"Look!" He gestured toward the people watching from the opposite bank. Some apparently thought he waved; they waved back.

Ruby laughed and waved too. "Do they realize how special we are? I feel very special tonight." She raised her face with eyes closed. Blue fireworks tinted her lids.

"Those people, they're too far away to see how beautiful you are."

She looked at him again with arched brows.

"It's true. You are—"

"We are . . ."

"—very beautiful."

"Don't you think that's a dangerous thing to say to your hostess, Captain Von Ray?"

"Don't you think that was a dangerous thing to say to your guest?"

"But we're unique, young Captain. If we want, we're allowed to flirt with dan—"

And the street lights about them extinguished.

There was a cry from the side street; the strings of colored bulbs as well were dead. As Lorg turned from the embankment, Ruby took his shoulder.

Along the island, lights and windows flickered twice. Someone screamed. Then the illumination returned, and with it laughter.

"My brother!" Ruby shook her head. "Everyone told him he was going to have power trouble, but he insisted on having the whole island wired for electricity. He thought electric light would be more romantic than the perfectly good induced-flourescence tubes that were here yesterday—and have to go back up tomorrow by city ordinance. You should have seen him trying to hunt up a generator. It's a lovely six hundred year old museum piece that fills up a whole room. I'm afraid Prince is an incurable romantic—"

Lorg placed his hand over hers.

She looked. She took her hand away. "I have to go now. I promised I'd help him." Her smile was not a happy thing. The piercing expres-

sion etched itself on his heightened senses. "Don't wear Prince's mask any more." She lifted the bird of paradise from the rail. "Just because he chooses to insult you, you needn't display that insult to everyone here."

Lorq looked down at the pirate's head, confused.

Foil eyes glittered at him from blue feathers. "Besides," her voice was muffled now, "You're too handsome to cover yourself up with something so mean and ugly." And she was crossing the street, was disappearing in the crowded alley.

He looked up and down the sidewalk, and did not want to be there.

He crossed after her, plunged into the same crowd, only realizing half-way down the block that he was following her.

She was beautiful.

That was not bliss.

That was not the party's excitement.

That was her face and the way it turned and formed to her words.

That was the hollow in him so evident now because moments before, during a few banal exchanges, it had been so full of her face, her voice.

"... trouble with all of this is that there's no cultural solidity underneath." (Lorq glanced to the side where the griffon was speaking to earnest armadillos, apes, and otters.) "There's been so much movement from world to world that we have no real art any more, just a pseudo-interplanetary . . ."

In a doorway, on the ground lay a lion's head and a frog's. Back in the darkness, Dan, his back sweating from the dance, nuzzled the girl with sequinned shoulders.

And halfway down the block, Ruby passed up a set of steps behind scrolled iron.

"Ruby!"

He ran forward—

"Hey, watch—"

"Look out. Where do you—"

"Slow down—"

—swung round the banister, and ran up the steps after her, "Ruby Red!" and through a door. "Ruby . . .?"

Wide tapestries between thin mirrors cut all echo from his voice. The door by the marble table was ajar. So he crossed the foyer, opened it.

She turned on swirling light.

Beneath the floor, tides of color flowed the room, flickering on the heavy, black legs of Vega Republic furniture. Without shadow, she stepped back. "Lorq! Now what are you doing here?" She had just placed her bird mask on one of the circular shelves that drifted at various levels around the room.

"I wanted to talk to you some more."

Her brows were dark arches over her eyes. "I'm sorry. Prince had planned a pantomime for the float that goes down the middle of the island at midnight. I have to change."

One of the shelves drifted toward him. Before it could respond to his body temperature and float away. Lorq removed a liquor bottle from the veined glass panel. "Do you have to rush?" He raised the bottle. I want to tell you all about me."

"Sorry." She turned toward the spiral lift that would take her up to the balcony.

His laughter stopped her. She

turned back to see what had caused it.

"Ruby?"

And continued turning till she faced him again.

He crossed the surging floor and put his hands on the smooth cloth falling at her shoulders. His fingers closed on her arms. "Ruby Red." His inflection brought puzzlement to her face. "Leave here with me. We can go to another city, on another world, under another sun. Don't the configurations of the stars bore you from here? I know a world where the constellations are called the Mad Sow's Litter, the Greater and Lesser Lynx, the Eye of Vah-damin."

She took two glasses from a passing shelf. "What are you high on anyway?" Then she smiled. "Whatever it is, it becomes you."

"Will you come?"

"No."

"Why not?" He poured frothing amber into tiny glasses.

"First." She handed him the glass as he placed the bottle on another passing shelf, "Because it's terribly rude—I don't know how you do it back on Ark—for a hostess to run out on her party before midnight."

"After midnight then?"

"Second," she sipped the drink and wrinkled her nose (he was surprised, shocked that her clear, clear skin could support anything so human as a wrinkle) "Prince has been planning this party for months, and I don't want to upset him by not showing up when I promised." Lorq touched his fingers to her cheek. "Third," and her eyes snapped from

the brim of her glass to lock his own, "I'm Aaron Red's daughter and you are the dark, redhaired, high, handsome son—" she turned her head away, "—of a blond thief!" Cold air on his finger tips where her warm cheek had been.

He put his palm flat against her face, slid his fingers back into her hair. She turned away from his hand and stepped onto the spiral lift. She rose up and away, adding, "And you haven't got much pride if you let Prince mock you the way he does,"

Lorq jumped onto the edge as the lift came around. She stepped back, surprised.

"What's all this talk of thieves, piracy and mocking mean?" Anger, not at her but at the confusion she caused. "I don't understand and I don't know if it sounds like anything I want to. I don't know how it is on Earth, but on Ark you don't make fun of your guests."

Ruby looked at her glass, his eyes, her glass again. "I'm sorry." And then his eyes. "Go outside, Lorq. Prince will be here in a few minutes. I shouldn't have spoken to you at all—"

"Why?" The room revolved, falling. "Whom you should speak to, whom you shouldn't: I don't know what brings this all up, but you're talking as if we were little people." He laughed again, a slow low sound in his chest, rising to shake his shoulders. "You're Ruby Red?" He took her shoulders and pulled her forward. For a moment her blue eyes beat. "And you take all this nonsense that little people say seriously?"

"Lorq, you'd better—"

"I'm Lorq Von Ray! And you're Ruby, Ruby, Ruby Red!" The lift had already taken them past the first balcony.

"Lorq, please. I've got to—"

"You've got to come with me! Will you go over the rim of Draco, with me, Ruby? Will you come to Ark, where you and your brother have never been? Or come with me to Sað Orini. There's a house there that you'd remember if you saw it, there at the galaxy's edge." They rose by the second balcony, rotated toward the third. "We'll play behind the bamboo on the stone lizards' tongues—"

She cried out. Because veined glass struck the underside of the railing and rained fragments over them.

"Prince!" She pulled away from Lorq, and stared down over the lift's edge.

"Get AWAY FROM HER!" His silver glove snatched another of the shelves from the inductance field that caused it to float around the room, and sailed it at them. "Damn you, you . . ." His voice rasped to silence on his anger, then broke: "Get away!"

The second disk hissed by their shoulders and smashed on the balcony bottom. Lorq flung up his arm to knock aside the shards.

Prince ran across the floor to the stairway that mounted at the left side of the tiered chamber. Lorq ran from the lift across the carpeted balcony till he reached the head of the same stairway—Ruby behind him—and started down.

They met on the first balcony.

Prince grasped both rails, panting with fury.

"Prince, what the hell is the matter with—"

Silver Prince lunged for him. His gloved hand clanged the railing close to where Lorq had been standing. The brass bar caved, the metal tore. "Thief! Marauder!" Prince hissed, "Murderer! Scum—"

"What are you talking—"

"—spawn of scum. If you touch my—" His arm lashed again.

"No, Prince!" (That was Ruby.)

"Lorq—!" (Ruby again.)

Lorq vaulted the balcony and dropped twelve feet to the floor. He landed, falling to his hands and knees in a pool of red that faded to yellow, was cut by drifting green.

He flipped, rolling on multichrome (and saw Ruby at the rail, hands at her mouth; and Prince, clearing the rail, in the air, falling toward him). Prince struck the place Lorq's head had been with his silver fist.

Crack!

Lorq staggered back to his feet and tried to regain his breath. Prince was still down.

The multichrome had smashed under his glove. Cracks zagged a yard out from the impact. The pattern had frozen in a sunburst around the glaring point.

"You . . ." Lorq began. Words floundered under panting. "You and Ruby, are you crazy—?"

Prince rocked back to his knees. "Fury and pain hooked his face up in outrage. The lips quivered about small teeth, the lids about turquoise eyes. "You clown, you pig, you come

to Earth and dare to put your hands, your hands on my sister!"

"Prince, please—!" Her voice taunted above them. Anguish. And her violent beauty, shattered with a cry.

Prince reeled to his feet, grasped another floating shelf. He flung it, roaring.

Lorq cried as it cut his arm and crashed into the French doors behind him.

Cooler air swept the room as the panels swung out. Laughter poured in from the street.

"I'll get you; I'll catch you, and" he rushed Lorq, "I'll hurt you!"

Lorq turned, jumped the wrought iron and crashed against the crowd.

They screamed as he barreled through them. Hands struck his face, pushed his chest, grabbed his shoulders. The screaming—and the laughter—increased. Prince was behind him because:

"What are they . . . Hey, watch out—"

"They're fighting! Look, that's Prince—"

"Hold them! Hold them! What are they—"

Lorq broke from the crowd and stumbled against the balustrade. For a moment rushing water and wet rock were below. He pulled back and turned to see.

"Let go of me!" Prince's voice howled from the crowd. "Let go of my hand! My hand, let go of my hand!"

Memories struck up, shaking. What confusion before, was now fear.

Beside him stone steps led to the river's walkway. He fled down, and

heard others behind him as he reached the bottom.

Then light ground flaring fingers on his eyes. Lorq shook his head. Light across the wet pavement, the mossy stone wall beside him—someone had swung a floodlight over to light him.

"Let go of my—" He heard Prince's voice, cutting through the others. "I'm going to get him!"

Prince raced down the steps, reflections glancing from the rocks. He balanced at the bottom, squinting by the floodlit river.

His vest had been pulled from one shoulder. In the scuffle he had lost the long glove.

Lorq backed away.

Prince raised his arm:

Copper mesh and jewel capacitors webbed black metal bone; pulleys whirled in the clear casing.

Lorq took another step.

Prince lunged.

Lorq dodged for the wall; the two boys spun around each other.

The guests crowded the rail, pushed at the banister. Foxes and lizards, eagles and insects joggled one another to see. Some one stumbled against the floodlight, and the inverted gallery in water shook.

"Thief!" Prince's narrow chest was in spasm. "Pirate!" A rocket flared overhead. The explosion thudded after. "You're dirt, Lorq Von Ray! You're less than—"

Now Lorq lunged.

Anger snapped in his chest, his eyes, his hands. One fist caught the side of Prince's head, the other jabbed his stomach. He came with blasted pride, fury compelled by bewilderment, with dense humiliation

breaking his breath against his ribs, as he fought below the fantastic spectators. He struck again, not knowing where.

Prince's prosthetic arm swung up.

It caught him under the chin, bright fingers flat. It crushed skin, scraped bone, went on up, opening lip and cheek and forehead, fat and muscle tearing.

Lorq screamed, bloody mouthed and fell.

"Prince!" Ruby (struggling to see, it was she who had jarred the light) stood on the wall. Red dress and dark hair whipped behind her in the river wind. "Prince, no!"

Panting, Prince stepped back, back again. Lorq lay face down, one arm in the water. Beneath his head blood slurred the stone.

Prince turned sharply, and walked to the steps. Someone swung the floodlight back up. The people watching from the quay across the Seine were momentarily illuminated. Then the light went up and over, fixing on the building.

People turned from the rail.

Someone started to come down the steps, confronted Prince. After a second, he turned back. A plastic rat's face left the rail. Someone took the transparent vinyl shoulder, led her away. Music from a dozen epochs clashed across the island.

Lorq's head rocked by the dark water. The river sucked his arm.

Then a lion climbed the wall, dropped barefoot to the stone. A griffon ran down the steps and fell to one knee beside him.

Dan pulled off his false head and tossed it against the steps. It thumped, rolled a foot. The griffon followed.

Brian turned Lorq over.

Breath caught in Dan's throat, then came out whistling. "He sure messed up Captain, huh?"

"Dan, we've got to get the partol or something. They can't do something like this!"

Dan's shaggy brows rose. "What the hell makes you think they can't? I've worked for bastards with a lot less money than Red-shift who could do a lot more."

Lorq groaned.

"A medico-unit!" Brian said. "Where do you get a medico-unit here?"

"He ain't dead. We get him back to the ship. When he comes to, I get my pay and get off this damn planet!" He looked over the river from the twin spires of Notre Dame to the opposite bank. "Earth just ain't big enough for me and Australia both. I'm willing to leave." He got one arm under Lorq's knees, the other under his shoulders, and stood up.

"You're going to carry him?"

"Can you think of another way to get him back?" Dan turned toward the steps.

"But there must be—" Brian followed him. "We have to do—"

Something hissed on the water behind them. Brian looked back.

The dark wing of skimmer-boat scraped the shore. "Where are you taking Captain Von Ray?" Ruby, in the front seat, wore a dark cloak now.

"Back to his yacht, ma'am," Dan said. "It doesn't look like he's welcome here."

"Bring him on the boat."

"I don't think we should leave him

in anybody's hands on this world."

"You're his crew?"

"That's right," Brain said. "Were you going to take him to a medico-unit?"

"I was going to take him to De Blau Field. You should get off Earth as soon as possible."

"Fine by me," Dan said.

"Put him back there. There's a pre-med kit under the seat. See if you can stop him from bleeding."

Brian stepped on the swaying skimmer and dug under the seat among the rags and chains to bring out the plastic box. The skimmer doffed again as Dan stepped aboard. In the front seat Ruby took the control line and plugged it into her wrist. They moved forward, hissing over the water. The small boat mounted above the spray on its hydrofoils and sped through the night. Pont Michell, Pont Neuf, and Pont des Arts dropped their shadows over the boat. Paris glittered on the shores.

Minutes later the struts of the Eiffel Tower cleared the buildings left, spotlighted on the night. Right, above slanted stone and behind sycamores, the last late strollers moved under the night lamps along the *Alee de Cygnes*.

X

His name was Lorq Von Ray and he lived at 12 Extol Park in New Ark, the capitol city of the Pleiades Federation. He walked beside the moving road. Through the wind shields, the winter gardens of Ark bloomed. People looked at him. That was because of the scar. He was thinking about Illyrion. People

looked, then looked away when they saw him look back. Here, in the center of the Pleiades, he himself was a center, a focus. He had once tried to add up the amount of money that devolved from his immediate family. He was the focus of four trillion pounds @sg, walking along by the clear walls of the covered streets of Ark, watching the glistening lichens undulate in the winter gardens. One out of five people on the street, so one of his father's accountants had informed them, was being paid a salary either directly or indirectly by Von Ray. At Saõ Orini, a lizard-like animal with a mane of white feathers roamed and hissed in the jungles. The miners caught them, starved them, then turned them on one another in the pit to wager on the outcome. How many millions of years back, those three footed lizards' ancestors had been huge, hundred yard beasts, and the intelligent race which had inhabited New Brazillia had worshipped them, carving life-sized stone heads about the foundation of their temples. But the race—that race was gone. And the offspring of that race's gods, dwarfed by evolution, were mocked in the pits by drunken miners, as the clawed and screeched and bit. And he was Lorq Von Ray. He caught his reflection in one of the mirrored columns; he stopped, just before the turn-off to nea Limani. The fissure dislocated his features, full lipped, yellow-eyed. But where the scar entered the kinky red, he noticed something. The new hair growing was the same color and texture as his father's, soft and yellow as flame.

LOCKED WORLDS

EDMOND HAMILTON

Illustrated by FRANK R. PAUL

When Edmond Hamilton wrote "Locked Worlds" in 1931 the "parallel worlds" theme was already becoming a familiar one to SF readers. But never before, or indeed in the years since, has anyone quite managed to match the excitement and wonder generated by this master-tale by one of the great science-fictioners of all time.

Chapter I

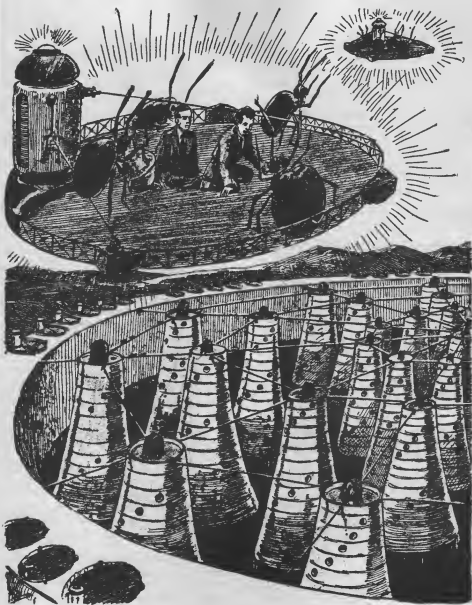
In giving this record to the world, it has not been my purpose to enter into the speculation and discussion aroused by some phases of it. Rather it has been my intention to present only my personal experience of the matter, from its first beginning with Dr. Adams' sensational theory to its mighty, world-shaking end. For these reasons, therefore, I have striven throughout to avoid all questions of controversy, and except for some facts which were public knowledge at the time, have confined entirely to those things which I either saw or did.

It is with Dr. Adams himself that I choose to begin. For more than a dozen years he had been the head of the Physics Department of Northeastern University, where I held my one humble instructorship in English, and where his work had raised him to the level of the very highest authorities in his chosen field of science. Though still on the best side of forty, his additions to atomic science had made his name known

to physicists in laboratories and lecture-halls across half the world. He was, without doubt, the most noted figure at Northeastern, and was at the same time the least-liked.

Tall, dark and bitter, with black, probing eyes and a turn for satire that could cut like a whiplash, he was decidedly antagonistic to most people. Among us of the faculty, indeed, he had no close friends or intimates whatever, with the exception of young Rawlins, his instructor-assistant, who was a particular friend of my own and as much liked as his superior was disliked. I do not think, myself, that Rawlins had any more real liking for Dr. Adams than any of us, but the physicist's great scientific attainments had ennobled him in the eyes of the younger man, who would never listen to anything we might say against his superior.

There was much that was said against him, indeed, since Adams' brusque manners and contemptuous indifference to his colleagues could not fail to rub some of us the wrong way. We frankly disliked him. The



man's utter, fierce devotion to his science would have won that respect from anyone, and it was heightened by the great work he had done and was doing. Much of that work, it was true, was so highly technical in nature that we could not understand it, for all Rawlins' enthusiastic explanations, but we did comprehend that Adams was doing revolutionary things in the field of atomic structure.

He had followed in the steps of Thomson and Rutherford in his special study of the atom, that inconceivably minute particle of elemental matter which was once considered indivisible, but which we now know is composed of a varying number of electrons, or tiny negative charges of electricity, revolving about a central positive charge or charges, the nucleus. It is intensely delicate work, the most delicate, indeed, in all science, this study of the natures of atoms and the movements of electrons. For though they are never to be seen, in their incredible smallness, by even the most powerful of man's microscopes, yet they may be studied and investigated through their effects upon larger and visible particles of matter.

In this work Adams had gone far, and was considered, as we all knew, as ranking with the greatest of the English and German physicists in his atomic and electronic investigations. He had been one of the first to suggest the possibility of discharging electrons in controlled streams, the so-called cathode rays. He had partly anticipated and duplicated the famous Rutherford experiments, in which actual transmutation of elements had been accomplished by

taking electrons from the atomic structure. It seemed, indeed, that he was but rising to new heights of achievement and fame, when there came suddenly, darkening all that he had already done, the publication of his sensational "interlocking atom" theory.

It was late in April that we of the university first heard of Adams' new theory, through Rawlins, who had taken some part in the experiments leading up to it, and who was very enthusiastic concerning it. His lengthy and involved explanations of it were too technical for us and I waved him aside in mock horror when he began them, but a few weeks later Adams' monograph concerning it was published, and the sensation which it aroused stirred in all of us some interest in the thing. Partly by a reading of the monograph, whole sections of which were far too technical for my wits, and partly through Rawlins' eager accounts, I managed to get a fairly clear idea of the theory, which within a week or so of publication was kicking up a tempest in a teapot among all right-thinking physicists.

Adams prefaced the body of his monograph by stating that the main interest of his whole scientific career had lain in the study of atomic structure, and that he had now to present a new theory concerning that structure whose implications were revolutionary to certain accepted physical laws. He began by pointing out that the spaces between the revolving electrons of each atom are quite immense in proportion to their size. The planets that whirl about our sun, indeed, are not proportionately

farther from each other than are the electrons of every atom. It was from a study of these spaces that Adams had brought forth his theory.

"During experiments of the last few months," he wrote, "I have been primarily concerned with a study of the motions and spacing of the revolving electrons of the atom, and have discovered a startling fact. You know that it has been suggested by scientists and by fiction writers that there might exist electronic systems, or atoms, wholly independent of the electronic systems which are our atoms, electronic systems which move through our electronic systems and form totally different atoms and worlds. This suggestion has been made many times, but without any basis of fact or truth, since we know that such electronic systems could not move through our own electronic systems without the nuclei of the one crashing into the nuclei of the other and destroying all, just as solar systems could not move through other solar systems without the suns of one crashing into the suns of the other and destroying both. Scientists have long known, though, that inside the electronic systems which are our atoms, there exist what seem to be stray electrons, electrons which revolve in an opposite direction to our electrons, though about the same nuclei. For we have learned that just as the planets of our solar system all revolve about our sun in the same direction, so in every atom of our world do the electrons revolve about their nucleus in the same direction, each one of our atoms being exactly like all the rest in the direction in which its electrons revolve about

their nucleus. Yet in our atoms there exist, also, as I have said, these stray electrons, which do not belong to our own electronic systems, but revolve about the same nuclei in an opposite direction.

"Suppose that this were the case in our universe, suppose that beside the planets of our own solar system there were planets which revolved about our sun in an opposite direction to our own. You see what that would mean? It would mean that in our one universe there would be two solar systems instead of one, two solar systems moving about the same sun, but entirely apart and distinct from each other, two solar systems locked together in the space of one planetary universe, moving about the same sun, yet totally different from each other by reason of their opposite motions. And it is the same, I have found, in the atoms, the electronic systems, of our world, our universe. For these electrons which we have considered stray electrons, and which move about the same nuclei as ours but in an opposite direction, form electronic systems totally different from our own; they are locked in the same space and move about the same nuclei, form atoms locked within our atoms and unknown and unseen to us, form worlds locked within our worlds. Unknown to and unseen by us, those worlds, those atoms, for though locked within our own worlds and atoms they seem to us only stray electrons, infinitely tiny electrical charges, moving opposite to our own electronic systems. While to those other atoms, to a dweller in the world locked in ours, our world in

turn would seem only stray electrons moving opposite to *their* electronic systems. Just as if, were two opposite-moving solar systems locked together about the same sun as I have suggested, each would seem to the other only a few stray planets moving through their own system, neither system guessing or dreaming that an equally real and concrete system was locked within itself.

"Thus have we two worlds, our own and that interlocking one, the atoms of each one locked within the atoms of the other, their electrons moving in opposite directions about the same nuclei, yet neither world dreaming of the existence of the other. And an atom of one kind in one world might be interlocked with an atom of a totally different kind in the other, though their nuclei were one and the same. Two electrons revolving about their nucleus in one direction might form an atom of helium in this world, whereas if but one electron revolved about the same nucleus in the opposite direction, it would form in the interlocking world not an atom of helium but an atom of hydrogen. Thus we might have two totally different worlds, two universes, locked together atom within atom, and yet separated from each other by a gulf proportionately greater than that between the stars by the fact that though their electrons revolve about the same nuclei, they revolve in opposite directions.

"But suppose you take the helium atom in this world, with its two revolving electrons, and with one electron revolving in the opposite direction to form a hydrogen atom in the interlocking world, and suppose

you reverse the motions of both electronic systems at the same moment, setting the two electrons revolving in the former direction of the one, and the one in the former direction of the two. If you were merely to halt the motions of the electrons you would only annihilate both atoms instantly, but if you were to reverse them as I have suggested, then you would have changed the two-electron atom of helium in this world into a one-electron atom of hydrogen, and at the same time would have changed the corresponding one-electron atom of hydrogen in the interlocking world into a two electron atom of helium. In other words, you would have transposed your atom of helium in this world into the interlocking world, and would have transposed the corresponding atom of hydrogen in that world into this one. If men can control the motions of electrons as they have done in the cathode rays and in the transmutation of elements, there is no reason why they cannot sometime control them so as to be able to accomplish this reversal of electronic motions. And when they can do so they will be able to transpose any atoms, any matter that atoms make up, from this world into the interlocking one, and corresponding matter of that world into this one, and can enter that world at will."

These were the most significant paragraphs in Adams' first statement of his theory, and, reading them, one is hardly surprised by the criticism which they called forth, criticism of a bitterness almost unprecedented in the realms of scientific discussion. That bitterness, I

think, was intensified by the contemptuous indifference with which Adams had always treated the majority of his fellow physicists, and which had made for him a host of enemies. Even without those enemies, so radical a theory as his would have met with a rough reception, no doubt, but when the critics of the theory were almost unanimous in disliking the man who had propounded it, it is not astonishing that their opinions of it were of an unusually cutting nature.

The idea of the interlocking of atoms, of two wholly different electronic systems moving in opposite directions about the same nucleus, was assailed and derided on all sides, only a few unimportant physicists here and there admitted that it might be possible. The great majority of Adams' fellow-scientists, to their own discredit, did not refute or attack his propositions by data of their own or by logical objections but instead simply asked whether any sane person could believe that two atoms or electronic systems could interlock with each other about the same nucleus, or that two nucleus, or that two masses of concrete matter, two worlds, could exist in the same space at the same time, yet each wholly invisible to and unsuspected by the other. They admitted that Adams' account of the loose or stray electrons discovered moving through the spaces between the electrons of our own atomic structures was correct, but denied that these formed any electronic system of their own, since, as they pointed out, their motions and existence had already been plausibly ex-

plained in a score of different ways. They concluded their attacks, for the most part, by demanding that Adams bring forward the experimental proof of his theory, which he had mentioned in his monograph.

I think now that in the case of a lesser man, the whole theory would only have been contemptuously dismissed, rather than attacked with such force. It was too good a chance against the satiric and arrogant Adams for his enemies to miss, and instead of dropping the matter after their first attacks they continued to press him for proof or for retraction of his theory. Adams himself seemed to pay no attention whatever to his critics, deigning no reply to them, but there was a set look in his face and a growing fierceness in his eyes that boded ill. I cannot deny that among the rest of us at the university there was no little satisfaction in seeing the sarcastic physicist thus humbled, though we all felt that the process was being carried a little too far. But Rawlins was still on the side of his superior, and was of the belief that in time the latter would vindicate his theory with irrefutable evidence.

"He's given up everything else, and is working late each night with these atomic structure experiments," Rawlins told me, as we lounged with our pipes one evening in my rooms. "He's going on with the same work that led up to his theory, and though he won't let me in with him now, I think that he'll succeed yet, and prove the whole thing up to the hilt."

"Prove fiddlesticks," I retorted unbelievably. "He must be as insane

as his own theory to try to find proof for it."

Rawlins shook his head. "I don't know. The theory seems a wild one, of course, but Adams is not the kind to go off half-cocked, and the extra-electronic motions his theory's built on do exist—I went far enough with him in his experiments to know that."

I laughed. "It would take more than a few extra electrons zipping between our own to make me believe that solid matter can interlock with solid matter, world with world," I told him.

The greater number of those at the university, whatever their scientific attainments, were of my opinion, and it became evident that, beneath their disapproval and the unceasing criticism from without, Adams' position was becoming daily more uncomfortable. We heard, in a roundabout way, that the university's venerable president had paid a friendly call upon Adams and had urged him to clear up the whole business and prevent the university's name from being lowered by an undignified academic brawl, by presenting his proof, if he had any, or by retracting his statements. To this suggestion, as we learned later, Adams had replied in vitriolic terms, stating calmly that it was not his custom to spend his time convincing idiots of what he himself knew to be true, and that the agitation and controversy of the scientific world over his statements did not concern him in the least. He also added, for the benefit of the president, that he was but little concerned with the good or bad name of the university,

since he counted himself a scientist and scholar rather than an academic politician.

Any lesser man, speaking thus, would have insured his own instant dismissal, and we expected momentarily to hear of Adams' dismissal. The whole matter, indeed, seemed to be rising into an open uproar, for the attacks upon the physicist had been increased and intensified by his own contemptuous silence. The thing could hardly be kept from breaking into an open row much longer, we knew, and we waited, with a certain zest, I must admit, for the opening of the battle. And then, with anti-climactic effect, Adams did the thing none of us had ever dreamed he would do. He shirked the coming battle and left the university.

It was between days that he left, unknown to and unseen by any in the whole institution, so far as could be learned. Rawlins reported that he had worked late in his laboratory on the night before, so late, indeed, that none had been awake to see him leave the building. The lights he had left burning in the place, and a curious tangle of complicated apparatus was found there whose purpose none could fathom. There was a great disk of shining metal some ten feet in diameter, lying on the laboratory floor, with a similar great disk suspended some eight feet directly above it, the two being connected to a mass of strange-looking generators, coils and switches. On the disk on the floor was a round section or mass of a curious blue clay or soil, several inches deep, and which it was assumed that Adams

had been testing. It seemed strange that he should have left the laboratory in such disorder, but a visit to his rooms had disclosed the fact that the same conditions prevailed there; only a few of his possessions were gone; the rest was carelessly left. It was the exit of a fugitive, of a coward, that he had made, we agreed, and the strange note which he had left for the president did not change our opinion.

That brief note, which was read to us at the next meeting of the faculty, was so strange indeed as almost to hint the possibility of a disordered mind. It read:

I am leaving the university and my position in the world of men for reasons which must be quite clear to all. Having made one of the greatest additions to scientific knowledge ever made by man, I have found myself subjected to unceasing ridicule and criticism. The world, in the person of its so called scientific men, has demanded that I either retract my theory or present proof of it. I cannot retract that which I know to be true, but I can and will present proof, proof which even this ignorant and incredulous world will be forced to accept; proof which, I venture to assert, this world and all upon it shall never to their end forget.

With the reading of that amazing note we all, I think, came to look on Adams as a self-deluded fakir who had fled with only one final burst of bravado. The note itself, of course,

was never given to the public, but it was known that Adams had left the university secretly and without controversy, and that proved to the satisfaction of all that the physicist's pretensions had been demolished by the devastating criticism levelled against them. None of us knew where Adams might have gone, and not one of us, with the exception of Rawlins, was much interested in the question. Adams' incomprehensible masses of apparatus were cleared away, another man took his place as the department head, and within a few weeks all was as quiet and serene as before the publication of Adams' crazy theory.

It was all of a month after the sensation of it had subsided that Rawlins came to my rooms, one June evening, with a strange thoughtfulness apparent in his face and manner. He had taken to heart, more than any of us, the affair in which his superior had been implicated, but I had thought that he had put the matter from his mind since then especially since he had not mentioned it to any of us. On this evening, however, after sitting silent for a time, smoking, he turned suddenly to me with a question.

"Harker, does it ever occur to you to wonder where Adams went?"

I looked sharply up at the question. "Why, no," I answered, with some surprise. "He left so strangely—I suppose he just went off somewhere to get clear of the whole affair."

"He left strangely, yes," said Rawlins. "But for where? All his belongings, almost, he left behind him. No one at all saw him go, and

though I've made inquiries, he's never been heard from since that night."

I was startled. "But he must have gone somewhere," I protested. "What are you getting at, Rawlins?"

My companion paused a moment before replying. "Harker," he finally said, "I knew Adams as well as anyone here, and though I had no personal liking for him, I know that he was not the type to run away from a battle. He was working day and night on his experiments through all that affair, working to get positive proof of his theory, to actually prove the existence of the interlocking world by transposing matter from this world to that, and from that to this. And if his experiments succeeded, as I believe they did, then he could well have performed the experiment on himself and transposed himself into that interlocking world."

"Good Lord, Rawlins!" I exclaimed. "You believe that? Believe that he was right about his interlocking world, and instead of leaving that night, transposed himself into that world?"

He nodded. "Yes. He went into the laboratory that night, Harker, but none ever saw him leave it. If he left it, he must have left it by that great disk-apparatus he had built, transposed himself by it into the world whose atoms interlock ours. I have studied that apparatus and I now firmly believe that it was built for that purpose, since it projects, from the upper disk to the lower, a ray similar to the radioactive rays used to break down atomic structures by Rutherford, a ray which halts the revolution of electrons in

any matter on the lower disk and reverses their motions, causes them to revolve about their nuclei in the opposite direction, at the same time reversing the motions of the other electrons, the other electronic system, transposing the matter on the disk into the interlocking world, and the corresponding matter in that world into this one. You remember the mass of strange blue clay found on the disk? What was that, but the corresponding matter in the interlocking world, flashed into this one as the ray flashed Adams himself into that world?"

"It seems possible," I admitted, staggered by the idea, "yet the whole thing is so strange. Why should he want to go into that other world, even if he could? Why not call his critics together and show them the thing for proof?"

Rawlins shook his head. "He was a strange man, Harker, a monomaniac in some ways, I think. His anger against his critics, against the world that condemned him, was intense, for all his silence, and it was not justice that he wanted, but revenge. I think that he went into that interlocking world with his anger against our own world flaming high, determined, as he stated in his last note, to give it a proof, a terrible proof, that it would never forget. And I think that that proof, that terror, is hovering now above an unsuspecting world."

He reached into a pocket, drew forth a few newspaper clippings, and handed one to me. "This appeared in a New York paper over two weeks ago," he said. "I wonder if you will see in it the importance that I do."

I took the little article in my hand. It was not more than a few inches in length, apparently a brief cable dispatch.

"Paramaribo, Dutch Guiana, May 26, Officials of the trading post located here report that an intense excitement of some sort appears to be stirring the native tribes in the little-known region in the southern interior. The natives assert that a small hill lying a few miles from their principal village vanished suddenly a few nights ago in full view of all the village, without quake or disturbance of any kind, being replaced by a round patch of bluish soil. An intense panic has swept over all nearby tribes as a result of this story. It is believed at this place that the earthquake of some sort, exaggerated by native superstition, though no such disturbances have been noticed here."

I raised my eyes to Rawlins', wonderingly. "I can't see the significance of that," I told him.

"Neither did I, at first," he said. "But read this one."

The second clipping he handed me was somewhat longer than the first, dated a few days later, and had evidently been written in a jocular vein by some humorous reporter. It read:

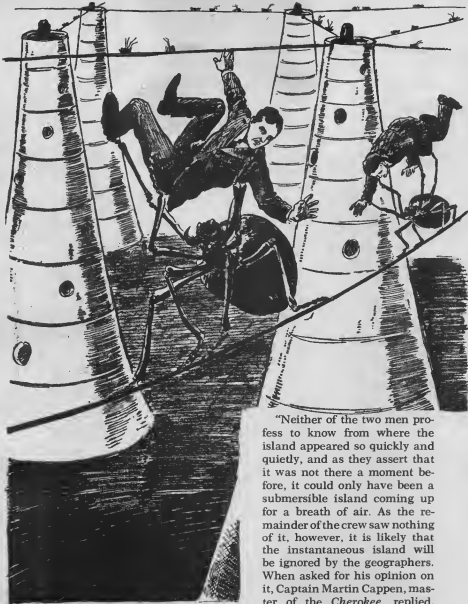
CAP'N JONAH OUTDONE BY MODERN MARINERS

First Mate and Operator of
Steamship *Cherokee* Report
Appearance of Floating Island

"New York, May 29. The age-old laurels of Captain Jonah as a teller of tall sea-tales are apparently in danger of being awarded to Robert Simms and E. Riley, First Mate and Radio Operator of the Blue Line freighter *Cherokee*, which arrived here from Hamburg yesterday morning.

"The two men in question are vehement in asserting the truth of their story, though their shipmates put it all down to the influence of the moonlight. It occurred, they say, on the night of the 25th, when the *Cherokee* was still several hundred miles east of New York. The mate was on the bridge, that night, and was joined shortly before midnight, he says, by the operator, Riley. They deny that any liquid refreshments were indulged in, and assert that they were both gazing over the moonlit sea when the thing happened.

"Both Simms and Riley are rather confused, unfortunately, as to just what did happen, but the kernel of their tale is that suddenly, in the sea a few hundred yards from the ship, a great circle of the waters seemed to vanish abruptly, without any unusual sound, to be replaced in the same instant by a great circle of solid ground of the same size, which hovered on the waters for a moment like a floating island and then sank from sight. It all happened so quickly, they assert, that they had no time to call any of their shipmates.



"Neither of the two men profess to know from where the island appeared so quickly and quietly, and as they assert that it was not there a moment before, it could only have been a submersible island coming up for a breath of air. As the remainder of the crew saw nothing of it, however, it is likely that the instantaneous island will be ignored by the geographers. When asked for his opinion on it, Captain Martin Cappen, master of the *Cherokee*, replied, "The only thing of which I am convinced is that the liquor sold in Hamburg is of a very high

power.' With Captain Cappen's opinion, the unbelieving world at large will very probably agree."

I looked up from that clipping with the strange idea of what Rawlins was driving at dawning across my mind. Silently I took the last one which he held out, and hastily scanned it. It was a brief as the first one, an inch-long press-note from a small Iowa town.

"Gorland, Iowa, May 29. J. N. Lurkan, a farmer residing some six miles south of this community, has reported an odd change in soil which has attracted some attention in this section. He states that a day ago he discovered that a section of pasture-land on his farm, acres in extent, had changed overnight from close-cropped pasture to a barren blue clay unlike any ever seen in this section. The section of ground affected was in the shape of a great circle, apparently, and as it is a little lower in level than the surrounding ground, it is his opinion that a washout of some kind must have stripped away the ground from above it. Neighbors, however, say that this is impossible since there have been no heavy rains in that district for the last few weeks."

I laid down that clipping and Rawlins and I stared at each other silently, intently. My brain was spinning with the thing that had suggested itself from a reading of those

three clippings, a thing too stupendous and undreamed-of ever to happen, it seemed, and yet one that apparently had happened. At last the voice of Rawlins broke the silence.

"You see the similarity of these three happenings, Harker? In each case a circle of familiar matter was whiffed away and replaced by one of unfamiliar matter, the hill, the circle of farmland, the first and the last being replaced, as you see, by a strange blue clay, a strange blue clay which we too found there on the disk in the laboratory. And that can mean but one thing—can mean only that Adams transposed himself into that interlocking world and now, using the same principle, has transposed great sections of our world into that one, from Guiana and the Atlantic and Iowa."

"But why?" I asked, and his face grew grave.

"I think that I can guess why," he said, slowly. "Adams went into that world mad for vengeance upon this one, and now he is able, apparently, to transpose great sections of matter from world to world at will. I think that these first transpositions are but tests, and that since they have been successful the hour of his vengeance is at hand. And that vengeance—what will it be? Cities and millions of humans whirled into that world by his power, replaced here on earth by the barren clay of that world? Seas of that world, maybe, transposed to this one and released to drown humanity? Strange beasts, strange beings, sent into our world to destroy and kill?"

I shrank from that awful vision. "But what can we do?" I cried, and

then Rawlins' eyes gleamed with purpose.

"There is but one thing that we can do," he said. "We have that disk-like apparatus by which Adams himself went into the interlocking world, and whose purpose I alone here have guessed. With that we can go after him, Harker, can follow him into that interlocking world and, if need be, destroy him, before we allow his terrible work to go on, before our world awakes to find red ruin crashing down upon it. Others would not believe me, would not credit this thing, I know, but you will, Harker. Into that interlocking world went Adams, and after him we two must go!"

I was silent, stunned, at Rawlins' suggestion. The whole thing seemed so fantastic, so incredible, yet I knew that he was right and that it was true; that in that unknown world, locked so strangely with our own, atom within atom, the vengeful Adams was beginning his deadly work, preparing to send God knew what horrors upon the races of man. To venture after him, to burst into that world so near and yet so infinitely far, to cross the vast abyss that separated electron from electron, and plunge into a new, strange world, that was a project appalling in its audacity. But as my brain steadied I saw clearly that Rawlins was right, that we two must follow and find him before he could complete his work of doom. I rose, then, and gave my friend my hand.

"We'll do it," I said, simply. "And God grant that we reach him in time."

The days that followed live in my

memory now as a confused period of swift preparations, many of which were quite incomprehensible to me. Rawlins had examined the great disk-apparatus and had managed to remove it to the little room that was his private laboratory, where we made a further investigation of it. It was long before we could solve the secret of the numberless connections which joined it to the ray-generators Adams had devised, but when we finally did so, we found that its operation was simple enough. We placed a stone on the lower disk, for a test, and swiftly pulled down the long lever-switch that stood beside it and that governed the intensity of the ray. At once a flood of blinding white light poured down from the upper disk upon the stone, and in an instant it had vanished, while where it had lain was now a little mass of pale blue clay or soil, in which were a few shining, unfamiliar little pebbles, or rocks. It was the corresponding matter of the world locked with our own, transferred into our own, as the stone was transferred to that, by the reversal of the motions of its electronic systems, or atoms. As Rawlins pointed out, it was highly important that the ray be turned on at its full intensity, so as to reverse the motion of both electronic systems and transpose them from one world to the other. Were the ray not fully turned on, it would not have power enough to cause that reversal, it would only stop the motion of both electronic systems about their nucleus, resulting in the instant annihilation of both atoms, which is

to say, the annihilation of the sections of matter affected in each of the two locked worlds.

We were satisfied with that test, however, and at once set to work to make a duplicate of the transposition apparatus itself, so that we could take this duplicate apparatus with us into the interlocking world and so have a means of returning at will. It was this construction of a duplicate apparatus which proved our hardest task, but we finally achieved it by copying minutely Adams' original apparatus, though much of the work which we did in this way was but little understood by either of us. At last, the duplicate apparatus was complete, and after making a similar test of it, which proved it to be satisfactory, we packed it into as convenient a form as possible and began to hastily assemble the remainder of our equipment:

Rough clothing, heavy automatics, and a supply of concentrated food tablets were the main items in our small outfit, and we took only a few days in assembling it and completing our last preparations. It was near the end of June that we finally found all ready, and prepared to make our start. We had taken nobody into our confidence regarding our plans, knowing well that we should only have been met by the same skepticism and ridicule which had been allotted to Adams himself. We had given out that we were leaving for a vacation, and since we would begin our novel journey in Rawlins' little laboratory, where the big transposition-apparatus was now

locked up, we had no fears that our strange departure or absence would be noticed.

At last all our preparations were finished and all was ready for our start. We had agreed to make that start at night. As we walked silently across the campus that evening, toward the great gray stone building that housed our little laboratory, the thing which we were about to do seemed utterly incredible. A June night—with the scent of flowers strong on the soft breeze, with the sound of laughter rippling through the darkness from houses at the campus' edge, with the young moon peering down upon us through the trees as we walked on. It seemed fantastic, I thought, that we were actually to venture into a new and unknown world that night. It seemed utterly beyond belief that within minutes more we would be farther from this familiar scene than the farthest of the calm stars above, and yet we would have moved no distance from it at all, at least as we humans think of distance.

Silent with that thought, we walked up into the big building, entered our little room, and after double-locking its door, turned to the apparatus that all but filled the room. The great metal disk on the floor, the similar disk swung ten feet above it, the masses of apparatus grouped beside them—they seemed to be silently awaiting us. It was but the work of a moment to pile our equipment and apparatus neatly upon the lower disk, leaving room for ourselves. Then Rawlins turned toward that disk.

"Time to go," he said, calmly.

With these words he stepped lightly upon the lower disk, and slowly I stepped beside him. We took a last look around the crowded little electric-lit laboratory, and then Rawlins reached toward the big lever-switch that rose on a metal standard beside the lower disk. He grasped it, hesitated a moment, and I felt my breathing tightening. I think that in that moment the same thought, the same icy dread of the unknown, was racing through both our minds. What was awaiting us on the other side, in that strange world locked with ours? The sheer unearthliness of the whole business was gripping us, at the last moment. Suddenly I saw Rawlins' jaw tighten, and he abruptly jerked down the switch.

The next moment there was a blinding glare of light from the disk above us, a light, a force, that flooded down upon us and that in that moment seemed to strike deep into the inmost center of my being, seemed to shake me like a leaf tossed by gigantic winds. Only for a split-second did that light bathe us, and then the little laboratory whirled about me for an instant with immense speed. I seemed to be falling, falling, reeling down through unthinkable abysses, and then light and consciousness alike had left me as I sank into a roaring blackness.

Chapter II

I opened my eyes to a glare of sunlight that caused me to swiftly close them, a white and dazzling illumination that for the moment blinded

me, and that beat down upon me with a torrid warmth. In a moment, through half-opened lids, I was able to see that I was lying on the bare ground at the bottom of a small bowl-shaped depression, or crater, with Rawlins lying beside me and our equipment and apparatus lying around us. Then I saw his eyes opening, too, and in a moment more we had got to our feet and were gazing about us.

The first thing that drew my attention was the sun above us. It was of the same size as our own sun, as near as I could judge, but was utterly different. It was blue white and intensely brilliant, its fierce white light and heat a complete contrast to the light of our own yellow star. It was the sight of that strange sun, I think, that first beat into my dazed brain the fact that we had succeeded, and had actually projected ourselves into the world locked with our own. And as Rawlins in turn gazed upward, his face lit up.

"We're there. Harker!" he exclaimed. "We've come through!"

Now, as I gazed about, I saw how unearthly a world it was into which we had come. Standing at the bottom of the little crater, our view was limited by its rim a half-dozen feet above us, but even within its bounds there was difference enough. The ground beneath and around us, we saw, was the same pale blue clay which we had already seen, and whose tinge had, perhaps, some relation to the blue-white sun above us. Here and there in it were white, shining rocks and pebbles, while along the crater's sides were little clumps of vegetation of a deeper blue,

strange, twisted little growths, which at first seemed not extraordinary, save for their color. As I watched them, though, I cried out to Rawlins. For the little clumps, I saw, were moving, moving slowly along the crater's side. They had no roots at all, we saw, but had strange little tendrils which they thrust into the ground as they moved along the barren soil. For all the world they resembled browsing animals, as they slowly passed along, and that, we learned later, was in reality what they were, the barrenness of this world's soil developing in the growths upon it a power to move about and gather their nourishment wherever it might be found.

For the time being, though, we could only guess at that explanation, and watched the browsing plants passing slowly along the crater's side with something akin to horror. In a moment more they had passed up over the crater's rim and had disappeared from view, though still we could catch sight of their blue tips as they moved slowly about. I turned to Rawlins, with the suggestion that we clamber up after them and survey the landscape from the crater's rim, but before the words could pass my lips he had uttered a cry that made me whirl around, and then stand as one transfixed, gazing up with him to the crater's rim above him. For a thing, a creature, had appeared there, whose appearance froze us into a momentary inaction of terror.

I can only describe my first impression of that creature by the statement that it resembled a huge spider, great and black and horrible. There

were some eight stiff, jointed limbs, black and smooth and powerful, which combined to support, perhaps five feet above the ground, a black, bulbous mass that was head and body combined, from the bottom of which two additional short and powerful mandibles or arms extended, and from which two strange, dark pupil-less eyes stared down upon us, dark, shining and unwinking eyes whose steady gaze held us there as though hypnotized. Only a moment the thing stood motionless, staring down upon us, and then from an orifice at its bulbous body's base came a high, shrill scraping cry, while at the same moment it hurled itself down the crater's side toward us.

As one in the grip of some terrific nightmare I saw it rushing down upon us, and then it was on us, gripping both of us in an instant with the two short, powerful arms or mandibles, hurling us to the ground. It had gripped me by the throat, and before the paralysis of amazement and fear which had gripped me was tightening around my windpipe, squeezing, strangling, choking me. I struck out blindly, helplessly, in that unweakening grip, and heard a hoarse cry from Rawlins as we whirled about on the bottom of the little crater in wild combat with the thing, its dark, unwinking eyes staring dreadfully into our own as we clung and battled together. My senses began to leave me, as that remorseless grip closed tighter around my throat, and then I saw Rawlins' heavy belt-knife flash in his hand, heard another high, shrill cry from the creature that held us

and then a dull, ripping sound. The next moment the grip that held me had relaxed, and as I staggered to my feet I saw the thing that had held us slump limply down on to the ground, a black, thick fluid oozing from the side of its bulbous head-body, where Rawlins' knife had pierced it.

He too was scrambling to his feet beside me, and for a moment we contemplated each other, panting and dishevelled, with wild eyes. Then we suddenly stiffened. From above us had come a score or more of high, shrill vibrant cries like that of the creature at our feet, and as we gazed up we saw appear on the edge of the crater, above us, a full two dozen of similar creatures, who stopped there and surveyed us like the first. Some of these, though, carried long, slender, needle-like rods of black metal in their short arms, and these they aimed instantly in our direction. It was plain that they were weapons of some sort, and, as we stood motionless and tense beneath their menace, the spider-creatures came down toward us.

I saw them inspect the body of the thing at our feet, then one uttered an order, and from one of the needle-like rods there flashed forth a slender bright orange ray which struck the limp body squarely. As it did so the shattered body vanished at once, beneath our eyes, and the brilliant ray was snapped off. Later we were to learn, what I half-suspected then, that the brilliant orange ray owed its effect to the acceleration of molecular motions which it caused. The molecules which make up any object are in constant motion, an

unceasing motion exhibited by the so-called Brownian movement, and though the object which they make up retains its form without change, it is only because their motions are limited in extent. The orange ray accelerated those motions by causing mutual repulsions between the molecules, which caused them to fly off in every direction, completely annihilating any object which they had made up.

Now, however, we waited tensely, expecting each moment that the brilliant ray would flash forth in destruction toward ourselves, in revenge for the one we had killed, and there was an instant's pause and silence. The whole scene, impressed unforgettably on my brain in that passing moment of stillness, was one of unearthliness beyond all telling. The blue soil, the azure vegetation moving slowly about, the blazing sun whose blue-white brilliance fell upon us, the weird creatures who stood before us—they made up a picture of fantastic grotesqueness, more fantastic, to me, because I knew that even at that instant, at the very spot where we stood, was the familiar, quiet little laboratory which we had left a few moments before, the world of ours so infinitely far from, and yet so closely locked with, this one.

A moment only the things examined us, their strange eyes roving over the equipment and apparatus which lay about us, and then one stepped forward and swiftly removed from us our weapons and all other objects on our persons. That done, one of them who seemed a leader, uttered a high-pitched, vibrant little

cry, pointed with one short arm up toward the crater's rim, and at the same time turned his slender ray-rod full upon us. His meaning was obvious enough, and without answering we started up the little crater's side, preceded and followed by the spider-men, who watched us closely. Looking back, I saw two of them gathering together and bringing with them the equipment and apparatus which lay on the ground.

"There goes our last chance to get back to our own world," I whispered to Rawlins, motioning toward these last two creatures and their burden, but he shook his head.

"We'll get back," he answered, in the same low tones. "And we're in this world, now, where we wanted to be."

I shared none of his confidence, in that moment, but was silent at an imperative gesture from our guards, and continued to climb on upward. This world, I reflected, could not be greatly different in size, at least, from my own, since the force of its gravity was to all appearances the same as that to which I was accustomed in our world. Then I forgot all else as we reached the top of the little crater, where we paused gazing out over the strange vista that lay about us.

It was a barren vista, at first sight, a vast expanse of bare blue soil or earth that swept away to the horizons in great, rolling plains, with neither lake, river nor mountain in sight. Here and there upon it were what were almost its only signs of life, clumps of the same strange vegetation which we had observed in the crater, moving slowly about

in search of sustenance from the barren soil, thrusting its multitudinous tendrils into that soil at times and pausing when it found the elements it sought. Except for these, though, the only feature of note in the landscape before us were three strange-looking objects which lay on the ground perhaps a hundred yards before us.

These seemed at first sight simply square black platforms of smooth metal, lying flat upon the ground, each having a low railing around its edges not more than a foot high. As I gazed at them, though, I saw that at a corner of each there rose a thick squat cylinder of metal, studded with shining switches. Toward these three platforms, each of which was some ten feet square, our guards motioned us, and as we reached them, we stepped over the low railing upon them, crouching down at their gestures of command. Rawlins and I and some seven or eight of the spider-creatures were upon one of the square platforms, a similar number of the things had taken their place upon another, while the remaining group did not accompany us but stood at a little distance watching us. On our own platform one of the spider-men stationed himself before the thick cylinder in its corner, and began to twist and press the studs upon its surface. A low purring sound rose from the platform's bottom, as he did so, and a moment later the whole flat metal surface rose smoothly into the air.

Straight up it rose, with smooth, effortless speed, until it hovered at a height of a thousand feet above the ground, the other platform ris-

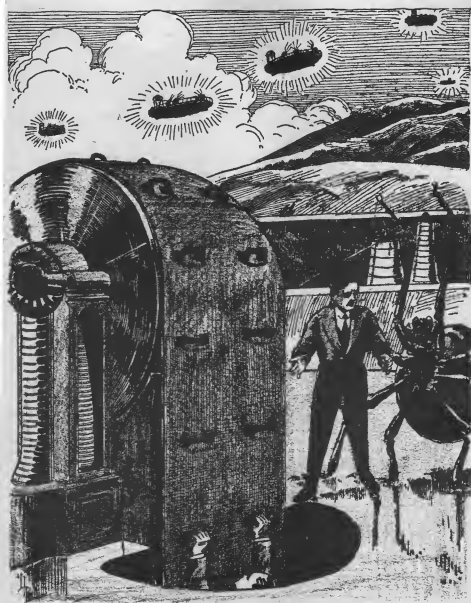
ing close beside it. They hovered there a moment, then both swept away toward the north, flashing through the air with rapidly mount-
int speed, a great wind rising about us and beating upon us as we sped on. Glancing behind I saw the remaining group of spider-men, beside the other black platform on the ground far beneath, apparently watching us depart, and then they had passed from sight behind us and we were racing northward over the great barren blue plains, devoid of any feature of note, save only the occasional patches of moving vegetation and here and there a little bowl-shaped depression or crater like that in which we had been captured.

As we sped on toward the north, I sought to discover the motive power of the strange vehicle which carried us, and from which came the low hum of power, which was the only sound of operation. I could only conclude that it was developed from forces unknown to us, but later I was to find that the principle of the flying squares was quite simple—it merely made use of the elementary laws of magnetic attraction and repulsion. This world of theirs, like our world, like any world, was a vast magnet, its two magnetic poles attracting unlike poles and repelling like poles. By the apparatus in the cylinder, the spidermen were able to make of the square platform a great magnet, so that it was attracted or repelled by either of the two magnetic poles of their world as they varied the nature of the magnetism with which the cylinder charged it. By skilfully controlling and chang-

ing that magnetic charge, they were able to raise the platform into the air and move it in all directions at will, so that the two platforms were now racing northward, pulled by all the magnetic attractive power of their world's north magnetic pole.

On and on we sped, high above the rolling blue plains, beneath the blazing bluish sun that now was slipping down toward the horizon from the zenith. At last our progress seemed to slacken slightly, and as I raised myself from the crouching position which we had assumed on the platform's floor, I could make out, far ahead of us, an outline of great black structures, that loomed against the skyline in the distance, which could only be a city of some sort. Toward them our two platforms were flashing on, their speed lessening with each moment, until at last they were within a mile of the city, moving ever more slowly down toward it.

It was indeed a city that I had seen, but a city of a strangeness unparalleled in the universe, I think, a city of cones, black gigantic cones which rose to a uniform height of a thousand feet or more throughout all the city, mighty cone-shaped structures set on their bases in even rows, ranks, streets, stretching away before us for mile upon staggering mile, into the distance, all of the same size, of the same height, the apex or point of each cut sharply across, truncated, to form a round platform some fifty feet across at the top of each. In scores, in hundreds, in thousands, they sat before us, surrounded by a vast black wall of the same height as they and of tremen-



dous thickness, that stretched away on either side from the field of our vision, encompassing all the mighty city. Down toward the city, down toward this huge wall, swept our two flying platforms, and as we dropped closer I saw for the first time the true strangeness and wonder of the place.

For from the flat, truncated top of each of the giant cones, there led out to the tops of the surrounding cone-structures, slender, shining cables of metal, a vast and intricate network of shining threads of communication that led across all the mighty city, connecting cone to cone and cone to wall, as far as the eye could reach. And along those airy cables, along those dizzy ways, there swarmed the hordes of the spider-people, racing from cone to cone on those shining threads without thought of danger, swarming in ceaseless thousands a thousand feet and more above the ground, along those slender cables. These were the streets of this strange city!

While we gazed upon that scene in awe, our two platforms had been dropping down toward the great wall that encircled the city, and in a moment had landed gently upon the flat surface of the mighty rampart, where lay other platforms of the same kind. Now, at a motion of command from our captors, we stepped out, toward the wall's inner edge, where one of the slender, shining cables led from it out toward the nearest of the great cone-buildings. We shrank back as one person from that giddy pathway of the air, but before we could understand their intentions, we had each been grasped by one of the

guards, who, holding us tightly in the grip of their two powerful arms, started off from the wall on the narrow cable, out over the city's floor a thousand feet below.

For the moment my heart pounded with fear as they bore us out along that airy way above the city, walking forward on that slender cable as easily as we might have done upon a sidewalk, their multiple limbs grasping it and holding it tightly. I held my breath, still rigid with fear, as they went on, but they seemed not to notice my agitation or that of Rawlins as they went forward. On they went, preceded and followed by our other guards, and in a moment they had reached the flat, round top of the nearest cone-structure, had crossed it, and were moving further in toward the city's center on a similar shining cable. Past cone after cone they went, bearing us tirelessly forward, across the flat tops of the great cone-buildings and along the cables that connected them, meeting and overtaking and passing others of the spider-creatures on those cables, until at last there lay before us a great circular clear space, or plaza, at the city's center, and in the center of which stood a single great cone building of the same size as all the others.

Out from its top there radiated in all directions innumerable shining cables, connecting it with the buildings of the vast city around it, and now our guards bore us on along one of those cables, toward the central cone-structure's top. As we passed along the cable toward it, I glanced down for the first time and saw that the spaces on the ground

between the great cones were all but deserted, smoothly paved with metal, and that the aerial cables seemed to be almost the sole avenues in use in this strange city. Then we had reached the central building's top, from which scores of the spider-creatures were constantly leaving and on which other scores were as ceaselessly arriving, by the cables. Now, as our guards set us down, we saw before us, at the center of the building's flat, round top, a curious mechanism, whose like I had glimpsed on the building-tops, over which we had already passed, but whose purpose I saw now for the first time.

The thing was like a great endless belt that rose out of a round black opening near the center of the round flat summit of the great cone, and that moved across that summit for a few feet and then disappeared down into a similar opening at a distance from the first. It was like a broad band of gleaming metal, flexible and endless, that moved smoothly and ceaselessly up out of the one opening, and down into the other, and set along the broad belt's length at every few feet were small curved metal staples, or holds. As we watched, we saw one of the spider-creatures rising out of the opening to our right, clinging to one of the hooks set in it. As the belt bore him upward to the level of the floor on which we stood, he released his hold and stepped out upon that floor, and a moment later was hurrying away from the building on one of the cables behind us. Others of the spider-creatures were ascending and descending by the same method, we saw,

making use of this endlessly-moving belt which was apparently the only type of lift or elevator used by the spider-men in their great buildings. And now our own guards motioned us toward the left-hand opening, into which the endless band descended.

One of them gripped it as it swept past him and a moment later was being carried downward into the darkness of the shaft, motioning with his ray-rod for me to do the same. I hesitated a moment, then grasped one of the holds on the band as it moved smoothly past me, and I too was being swept downward into the darkness, Rawlins and the other guards following me. A moment later the darkness of the shaft gave way to light, as the belt to which I clung shot down into a long, great corridor, into the floor of which the belt vanished through an aperture like that above, while a few feet from it a similar aperture permitted the ascending side of the endless band to rise upward. As he reached the level of the corridor's floor, the guard below me stepped out upon it, and I followed his action. A moment later Rawlins and the other guards were at our side, and we were marched down the long corridor which turned abruptly into a doorway some distance down its length.

We found ourselves in a big room, lit up by high openings in its walls, through which there poured the light of the sinking white sun outside. Shelves and tables littered with scientific apparatus of all sorts filled the room, which had the appearance of a laboratory, while at a desk or bench across the room

from us, four figures were standing, intently examining some instrument before them. They turned as we were marched in by our guards, and we saw that three of them were spider-men like our captors, hideous, many-limbed black figures. But it was the fourth figure that held our attention, we stared at him in utter amazement. A human figure! We gasped at the sight of him. It was Adams!

Stunned with surprise, we stood there, gazing at him, while he in turn regarded us with smoldering eyes. To encounter him here, in this strange city of the spider-people, was the last thing we had expected, though it was in search of him that we had come to this strange world. Then, as we gazed, Adams came forward toward us, his burning eyes fixed upon our own.

"So you came after me, Rawlins, into this interlocking world," he said, his voice low but charged with deadly menace. "I thought that perhaps you would—I thought that some might find the apparatus by which I came through to this world, and might dare to follow me, so I gave orders that the spot where I came through be watched. That is why you arrived in the hands of my watchers. You come in time, Rawlins," he went on, his voice suddenly shrill, mad. "I have needed here the help of someone who could understand me perfectly, who could follow my orders in all I have set out to do here, in all that I am doing!"

Rawlins found his voice. "Adams!" he exclaimed. "I came after you because I, at least, know what you are doing, know that already you have

made three transpositions of matter from our world to this one, and from this to that."

The mad scientist before him laughed gratingly. "You know that, Rawlins?" he asked. "Then you must know all the rest. Must know that those three transpositions I have already made were but tiny tests. You must know that within days now, when I have completed my work, with your help, it is not mere bits of barren land that I will transpose into that world of yours, that world that derided me. I will transpose cities, the scores of mighty cities of these spider-men, who are weary of this world and to whom I have promised to give the world of man, in exchange for this world, to conquer and destroy and hold it forever. And that is the proof which I shall give to the world that demanded proof!"

He laughed wildly as he finished, and now, as I realized the tremendous horror that loomed above our world, I felt the blood driving from my heart. Rawlins' face had gone dead-white as he listened and now, with a hoarse shout, I saw him leap straight forward toward Adams! I too shouted and sprang to his side, but before I could reach or stay him, the ray-rods of the guards behind us had sprung up and a half-dozen shafts of the brilliant deadly ray were flashing toward us!

Chapter III

The moment that followed was to me only a split-second, lightning-like whirl of swift action. At the moment that the deadly orange rays had been released upon us, we had

both been leaping forward, and it was that fact alone which saved us, because as we leapt, the brilliant rays grazed past just behind us. Before they could loose the rays again, the spider-men beside Adams had sprung forward and gripped us with their powerful arms, swaying with us there for a moment, and then forcing us back once more, holding us tightly.

Adams came toward us again, his black eyes flaming with the same deadly light. He uttered a series of swift commands in the shrill, vibrant speech of the spider-people, and then spoke to us.

"You will stay here, Rawlins," he said, quietly, "to give me your help when I need it. A little persuasion possibly of a painful sort, will overcome all your scruples, I think. As for Harker, the spider-men can have him. I believe that they have a very interesting method of disposing of their prisoners."

He uttered another shrill, short order, and in answer the guards about us jerked us back to the room's door, back into the long, high corridor. There we were separated, Rawlins being conducted farther down the corridor while two of the spider-guards returned with me along the way we had come. Glancing back, I saw Rawlins' guards halt him farther down the long hall, saw one of them press a stud in it which caused an opening in the wall to appear instantly, a narrow, perpendicular slit that widened swiftly until it was a full-sized door. Through this opening Rawlins was thrust, with a last wave of his hand to me. As the door closed again, I turned back to

my own predicament, and found that my two guards had halted me before the ascending side of the endlessly moving belt on which we had descended.

A moment later saw three of us moving smoothly upward on the belt, holding to hooks along its length, and when we had stepped out upon the top of the great cone-building, I saw that darkness was falling upon this giant city of cones, for away to my left, the dazzling white sun was sinking below the horizon. Far below, on the smooth metal paving between the great cones, numbers of the spider-people were moving slowly about, while the traffic on the myriad cables about us seemed to have lessened somewhat. I noticed now, too, what I had failed to observe on my arrival. On the top of this central cone, toward one edge, was gathered a mass of familiar-looking apparatus, very like that which had actuated the transposition machine on which we had come to this interlocking world. Before I could speculate on its presence there, however, one of my guards had grasped me and was moving out upon one of the slender cables that radiated from this central building.

As he moved on I noticed that though the thickening twilight was descending upon the city, great gloves of light were shining out, big spheres of shining white light suspended here and there above the tops of the cone-buildings, while other floods of the same white light poured out through the narrow window-openings of those buildings. That illumination was very like the light of the sunken white sun. It was,

in fact, as I learned later, sunlight, caught and held during the daytime and released at night. Theoretically, even in my own world, I knew, it would be possible to catch a ray of sunlight between two mirrors, for instance, and keep it reflecting from one to the other indefinitely until it was released. In practise, of course, the imperfections of the mirrors would defeat such a plan. But the spider-men had devised a means by which the vibrations of their sunlight, caught during the day by great light-traps, or lens affairs, were kept stored in a state of unceasing vibration until it was desired to release them as common light once more.

Across all the mighty city, reaching away into the distance on every side, there shone these great white globes of light, but for all their illumination and that which poured from the myriad windows of the great cones, the cables above the city lay in near darkness. Over them, the spider-people still moved unhesitatingly, and now I saw that the guard who was carrying me was reaching the end of the cable, which led from the central cone to one of the circle cones that lay at the edge of the round plaza in which the central building stood. At last we were upon the top of the building at the cable's end, and as I was set down there by my guard I saw, that, unlike any other of the buildings I had seen in the city, there were upon this building's top a dozen or more of spider-guards, armed with ray-rods, who challenged us in shrill tones as we reached the building's top.

My own two guards answered

briefly, and the others stepped aside and allowed us to make our way to the endless belt, which was the one means of ascent and descent in all these buildings. Already I had guessed from the presence of the guards at its top that this building was a prison, and my guess was verified, when after descending half-way down into the building's interior on the great belt, down past a dozen or more levels, we stepped from it upon the floor of another corridor, which, like the others we had come down through on the belt, was patrolled ceaselessly by a half-dozen of the spider-guards. To these again my two captors made brief explanations, then stepped to the smooth wall of the corridor, touched a stud there, and as a narrow, vertical slit appeared in the wall and widened to form a doorway, motioned me through it with their deadly rods.

I stepped inside, slowly and hopelessly enough, and instantly the door began to close behind me, narrowing to a slit and finally disappearing, until only the blank wall was visible. However that strange door was operated, it was as perfect a one for a prison-cell as could well be devised. I turned from it, however, to the interior of my prison, which I found was a small, square room whose only visible opening was a narrow, barred window in the wall opposite me. Through that window there filtered into the dark little room, a feeble white light from the myriad globes of the city outside, and now, by that dim light, I saw that there was another in the room with me, a dark, erect figure, who was coming forward toward me.

For the moment, as it came toward me, I had a wild hope that it was a man like myself who was prisoned here with me, so erect and man-like was that shape as seen in the little room's dim light. But as it came nearer, I shrank back in sudden fear, for this was no man, for all its man-like shape. The erect white body, the two legs or supporting limbs and the two strong upper arms, these were human-seeming enough, but there the resemblance ceased. For though the skin was dull white in color, it was hard and grained in appearance; the arms and the legs both ended in great, three-clawed talons; while the head of the creature, set squarely upon its shoulders, was oddly bird-like, with two small, intelligent dark eyes, a hooked owl-beak between them, which was mouth and nose combined as in any bird, and a thick crest of short white feathers upon the head in place of hair. The only clothing of the creature was a number of leather straps, or belts, about its body. All the fear and awe with which I had first beheld the spider-men returned to me at sight of this strange creature, as it came straight across the cell toward me!

I stood silent, hardly breathing, as it came on, thinking for the moment that I had been thrown by the spider-men to the mercy of some strange beast. Then the creature stopped, a sudden curving of muscles wrinkled its face into a grotesque smile, and it spoke to me in deep, guttural tones that were wholly out of place with its bird-like appearance. It was apparently repeating words to me in some unknown language,

and as my fear of the thing lessened a little, I smiled in turn. To show that I, too, was an intelligent being, I addressed the creature in my own tongue.

He shook his head, after a moment's thought, pointed to himself, and repeated a few syllables over and over again, still pointing to himself. "Nor-Kan" was what he seemed to be saying, pointing always to himself, and finally I began to understand that he was naming himself, so I in turn pointed to him and repeated the words, at which the grotesque smile re-appeared on his face. Then I followed out the same procedure with myself, pointing to myself and repeating my own name, and within a few moments Nor-Kan, as I had begun to call him, began to understand. Forgetting my own captivity and the enigmatic fate which awaited me, in the interest of this strange creature, I went on in this manner with him through the hours of that night, and by dawn I was still sitting with him in a corner of a little room, learning the words of his strange language by the simple process of having him point to some object, or perform some action, and then repeat for my benefit the corresponding word or words.

With dawn came one of the spider-creatures, opening the door of our cell a few inches and thrusting in a handful of small brown pellets which my companion indicated was food. They were almost tasteless in eating, yet I discovered that had an extraordinary satisfying power not only for hunger, but thirst as well. Our scanty meal over, I stretched myself on the floor and slept for hours, a

sleep broken by nightmares, yet far from the horrible actualities about me. When I awoke, darkness was again settling upon the city outside, and I found my strange companion quietly sitting across the cell and regarding me.

Soon we began our former task of exchanging words and ideas, and within a few hours I had progressed so far in manipulation of the strange gutturals, that we were able to converse in a crude and broken fashion. I pass over the many ludicrous mistakes which I made in the course of our speech, for in spite of these, our progress continued, and by the end of that night I found myself with a rough idea of the situation in this weird interlocking world into which Rawlins and I had come.

Nor-Kan, I found, was of a race totally different from the spider-men, and sharing with them this strange world, the two races being deadly enemies. Ages ago, I learned, the race of Nor-Kan had risen to the position of dominance over this world, as the most intelligent creatures upon it. They had not developed from the mammal races, as did man in our world, but from the bird-races, and though they were still, like Nor-Kan, somewhat bird-like in appearance, they were in reality as far removed from the feathered races from which they had sprung, as man is removed from the great ape-races that were his own progenitors. This race of bird-people had developed a civilization as great as, and greater than, that of man, and over all this world their own cities had stood, while over all other creatures upon it their domination had been established.

Gradually, though, with the increase of their science and their power, the bird-people had softened somewhat, as conquering races will do, and their peoples had less and less desire to perform the various labors of their world. Much of these, it was true, were done by machinery, but much there was that needed directing intelligence, and this was a work for which few of them had any liking whatever. Pressed by the desire of all their peoples, the bird-races' scientists strove to solve the problem set before them, and finally did achieve a solution, which was greatly applauded by the bird-races but which, unknown to them, held within it the seed of their own downfall.

There was among the other creatures of this world a race of spiders, or spider-like creatures, larger than any spiders of earth, but no higher in consciousness and intelligence, and it was in these that the scientists of the bird-races found the solution to their problem. They took individuals of these spider-races and began to alter their very being, changing the nerves and gland-organs in their bodies subtly to make their bodies grow to great sizes, breeding them scientifically one with the other, always with greater intelligence as their goal and continuing this process onward and onward, until they had developed from these spider-races great spider-creatures, whom they had furnished with powerful arms, and enough intelligence to receive and execute the orders of the bird-people, who could control and direct the machinery of the bird-people without needing their supervision.

Thus were the bird-peoples freed from a great part of their labor, which was now performed by the semi-intelligent spider-men. As time went on, too, these spider-men constantly increased in intelligence under their masters, so that they could take over a greater and greater share of the work of the latter, since it was necessary to increase their mental capacity to ever-greater amounts, in order that they could comprehend and execute the increasingly complicated work, which they were now called upon to do. Through the centuries, this process went on, and the result of such a state of affairs might well have been foreseen. There came a day when the spider-servants had attained as much intelligence and science as their masters, whom they greatly outnumbered, and in that day they rose as one and turned upon those masters.

Then there had been flaming revolt and war across all this world, the mighty hordes of the spider-men rising against their masters, until but comparatively few of the bird-races were left. These few, some tens of thousands in number, the spider-men had driven steadily back, southward, away from their cities, until only a realm of a few hundred miles about the southern pole remained to the bird-races. There they made their last stand against the spider-men, building their cities there and erecting great barriers around them, which the spider-men, for all their power, could not pass. And in their realm of the southern pole, as habitable beneath the blazing sun as any other portion of the world, the bird-races had stayed, a remnant of their former might, while

the spider-men held all the rest of this world, rearing upon it their own strangecities. More than once though, in the centuries that had passed since, Nor-Kan informed me, the spider-men had made attempts to break through the barriers of the bird-races and destroy them, while raiding-parties of the bird-peoples, in turn, still flashed northward occasionally to strike a blow at their ancient enemies. It was on such a raid that he had been captured, he told me, having been forced to the ground near one of the spider-cities, as he returned with others from a raid, by a defect in the mechanism of his air-boat. The air-boats of the bird-races, he explained, were wholly different from the flying-platforms of the spider-men; being torpedo-like in shape, lifted and flung through the air by a mechanism which cast around them a sheath of invisible vibrations, which were impenetrable to all gravitational force, and by altering which, the craft could be sent at great speed in any direction. He had just repaired the mechanism of his own, he said, when a patrol of the spider-men had pounced upon him and brought him as a prisoner to their city.

"And you've made no effort to escape?" I asked him. He smiled that grotesque smile. "How?" he asked hopelessly, throwing an arm out toward the cell around us, the barred, narrow window. "Even if one could, in some way, open the door of our cell, the corridors outside are constantly patrolled by guards. Even if one got through those corridors and up to the building's top, he would find only more guards there. And if by some miracle one could overcome

those guards also, what then? He would still be in the heart of the spider-city, with only those cables leading outward over it, cables and building-tops swarming with the hordes of the spider-men. It is hopeless to try."

I shook my head in stubborn denial, and turned to examine our cell more closely. To escape by its door was obviously impossible, for it was opened only by the stud outside, and presented to us only a blank surface. And as I examined the window, it seemed that it too was hopeless, obstructed as it was by two thick metal bars which were set firmly in the wall at top and bottom. The window itself, as I could see, was, like our cell, half-way up the side of the great cone-building, more than five hundred feet from either the metal paving below or the building's top. To escape through the city below was wholly impossible, I knew. Our only chance was to gain the building's top and somehow make our way to the near-by buildings, where Nor-Kan told me that he had seen his air-boat stored. It seemed a mad-man's scheme to attempt to reach our prison's top, but as I gazed out and saw that at intervals of six feet or more a narrow band or molding encircled the cone-shaped building, I began to see how an escape might be made, wild as the attempt would be.

Swiftly I outlined my scheme to Nor-Kan, and though he shook his head as I unfolded it to him, his eyes were snapping with excitement. When I had finished, he admitted that he might as well perish in making the attempt as wait for the tor-

turing end, which the prisoners of the spider-men inevitably meet with in their laboratories. If we gained the top of our prison, we agreed, he was to make an effort to reach and steal his air-boat from the near-by cone-top where it was stored, while I was to venture back toward the central building where Rawlins had been imprisoned and attempt to free him, awaiting Nor-Kan on that building's top. The whole scheme seemed as mad a one as could possibly be devised, but it was at the same time our one chance for life and liberty. We began to work upon it at once, turning our attention toward the window-bars which obstructed that opening.

To sever those bars was the thing upon which all our scheme rested. Luckily we had a crude means of doing so. Though Nor-Kan had been stripped of all his possessions, just as I had been, his captors had overlooked the heavy metal buckles of the leather harness, being attracted by the weapons which he wore. These buckles were long, with finely serrated edges of hard metal, crude little miniature saws, in fact, made so as to make more secure the weapons and tools which were sometime hung upon them. In a moment we had disengaged two of the buckles, and with their edges had set to work upon the bars, at their bases. Dawn was breaking again upon the city outside, and we ceased our work until the door had opened and our strange food had been thrust in. Then we turned again to the bars and sawed furiously at the thick metal.

Through all of that day we worked

on at the two thick bars, stopping only now and then for a moment of rest, and when darkness came again had almost severed them. A few more hours of work followed, work which we could carry on only by the faint light that fell upon us from the great radiant white globes scattered here and there across the city, and then at last we had cut through both the bars. That done it was but the work of a few minutes, exerting all our strength on each bar in turn, to bend them inward and to one side. Then I leaped upon the sill of the narrow opening, and sat for a moment straddling it, gazing cautiously out over the scene before me.

Before me lay the great panorama of the city of the spider-men, a forest of dark, gigantic cones whose openings gleamed with white light. To my right lay the circular clearing at the city's center where stood the single cone that was the prison of Rawlins, and looking up I saw that only a few spider-creatures, here and there, were moving over the many cables. Beneath me the slanting wall of the great cone dropped downward at a sharp angle toward the metal paving below, upon which there moved a few of the spider-men, though for the most part they seemed to retire within their great buildings at the coming of night. I glanced downward, then upward where the great wall slanted sharply up above me, and then gently swung myself out of the narrow window until my feet were resting precariously upon the narrow band or molding just below the window, one of the similar bands, either ornamental or to increase the structure's strength, which

encircled it at intervals of six feet or more from its base to its truncated tip.

The molding was not more than an inch in thickness, and for an agonizing moment while I teetered upon it, I was reaching upward toward the next band above it. As my hands finally gripped that band, Nor-Kan was emerging from the window beside me, and a moment later I felt his powerful arms pushing me slowly up the steeply slanting side of the great building, up until my feet were resting upon the narrow band which my hands had clutched a moment before. Then, grasping one of the straps about his body, I slowly pulled him up beside me, and in another moment we clung together to the narrow foothold. And then I was reaching upward again toward the encircling band above us.

The time that followed, while we crawled in this way up the side of the mighty building like two strange insects, was, I think, the most agonizing in all my life. Upward we went, from band to band, clinging with all our strength to our inch-wide foot-and-hand-holes, pushing and pulling each other in turn up the side of the gigantic cone, avoiding all the openings in its side as we clambered slowly upward. We were within a hundred feet of the great cone's top, and hopes of success were beginning to rise within me, when suddenly, as I stooped slightly to pull Nor-Kan up to the narrow band on which I was standing, my feet seemed to slip beneath me upon that band, and instantly I was reeling downward!

Had the building's sides been vertical, nothing could have saved me from a hideous death on the metal paving hundreds of feet below, but the steep slope of the great cone's sides saved me. For before I had fallen a half-dozen feet I was scraping along the steeply slanting side in my fall, and as I did so my hands caught, automatically and entirely without conscious thought, upon one of the narrow bands up which we had come. The narrow band was no more than enough to give a hold to my finger-tips, and for a moment I clung there with all the energy of despair. I felt my hold giving, as I swung gently to and fro, felt my cramped fingers straightening, slipping, and then as they gave up their holds nervelessly, my hands were gripped by strong talons from above, and within another moment Nor-Kan had pulled me up beside him.

For minutes we clung there without moving, lying inward against the slant of the great building, while I regained my breath, and overcame the violent trembling that had seized me, and then we took up our climb again. Still up and up we went, from band to band, until at last we were within a few yards of the cone's flat, round top. There came down to us through the darkness from that top, the sound of shrill, high voices, and the occasional sound of shuffling limbs, so that we knew the guards were there and watchful. Slowly, stealthily, we made our way upward, and finally had reached the last of the encircling bands. Standing upon it, we could raise our eyes cautiously above the level of the building's top.

Upon it, we saw now, were about a dozen of the spider-men, all armed with the deadly ray-rods, conversing desultorily amongst themselves, while one or two moved restlessly about. The white globes of light suspended here and there above the city, shed a clear light upon the scene, and we saw that it was madness to show ourselves upon the great cone's top. Just above us, though, within our reach, there stretched the shining slender cables that led from the cone's top out to the near-by buildings, and it was to reach these that we had risked our lives in our great climb up the building's side. Silently, still clinging to the upmost band, we began to move around the building.

On we went, with slow, stealthy progress, but before we had gone a dozen feet one of the buckles of Nor-Kan's straps flapped inward and clanked with a metallic sound against the building's wall. At once we flattened ourselves against that wall, praying that the sound was not heard, but even as we did so, there came the sound of shuffling feet or limbs as one of the spider-guards above crossed the round platform toward the edge where we crouched. Were we discovered, a single push would send us both down to a fearful death a thousand feet below, we knew, and we held our breath as the shuffling steps came closer.

The creature could hardly have been more than a few feet from the edge just above us when from one of the other spider-men on the building's top came a shrill call. The guard who had been moving toward

us to investigate paused, and after a tense moment, retraced his steps towards the others of the group, where we heard him joining in their conversation. We drew long breaths, and then started on, around the edge of the great building's top toward the cables we sought.

In a moment more I had reached the cable which led out toward the top of the cone in the central clearing, and as I paused there, Nor-Kan crept on and then he too paused beside another of the cables, indicating to me that it was the one he had sought. Then, gripping it with his strong taloned hands, he started to swing himself along its length through the darkness. In a moment more he had disappeared into that darkness, and summoning all my resolution, I grasped the slender cable just above me with my own hands, and with a silent motion swung myself from my precarious position on the building's side out into empty space, hanging from the cable with more than a thousand feet of empty air between myself and the hard metal surface far below.

Hand over hand, outward I swung along the slender cable, out into the darkness toward the top of the central cone, hundreds of yards away. At any moment I expected a shrill cry from the guards on the roof behind me to herald my discovery, but the shrouding darkness hid me from their eyes, and as I swung on, I felt a rising hope that I might yet succeed. Far below I could glimpse the metal paving, glinting dully in the light of the white globes of light throughout the great city; I could glimpse upon it a few of the spider-

creatures moving from building to building, while here and there on the myriad cables about me I half caught sight of other dark spider-shapes moving along those shining threads.

On and on I swung, until I had crossed half the gulf that lay between the two great buildings, but by then I felt such overpowering fatigue in my arm muscles that, for a few moments, I swung from the cable by my knees to give my arms a slight rest. Then, reaching up again, I swung on my way once more, hand after hand, but before I had gone a dozen feet farther I stopped abruptly and hung motionless. From ahead of me, along the cable, came a slight scurrying sound that chilled my blood. For as I hung there I saw the figure of a spider-man coming toward me, out of the darkness. On he came along the cable, suddenly saw me hanging there, a thousand feet in mid-air, and as he did so, he stopped short, and gazed at me. Then he uttered a shrill cry, seemed to gather himself, and was leaping forward along the cable, straight toward me!

Chapter IV

I think now that the paralysis of fear that gripped me could have lasted for only the briefest possible moment, but at the time it seemed eternities to me as I watched that dark, hideous shape flashing along the cable toward me as I hung helplessly. Before it could reach me, though, enough of my presence of mind had returned to me and I swiftly swung up, and buckled my knees again about the cable, just as

the creature grasped me by the body, clinging to the cable with its own multiple limbs, while I in turn strove for a hold on the hideous bulbous mass that was both its head and body.

In a moment I had grasped it, and then, locked in a death-grip, we swung there on the slender cable, struggling silently in the shrouding darkness, far above the ground. In utter, deadly stillness we swung and twisted there, while all about and below us the white-lit openings of the great cones and the radiant globes above them gleamed through the darkness like great white eyes staring at us. Exhausted as I was, though, I knew I was no match in strength for the creature with whom I struggled, and at last I felt myself being slowly lifted up by his powerful arms, away from my desperate hold upon the cable.

Up I was lifted, up and sidewise, until I felt the last of my grasp on the cable going, and knew that a moment more would see me hurled down to death below. Nothing could save me, I knew, and at the thought such a mad despair and fury surged through me, that, filled with a wild resolve to take my opponent with me to death, at least, I suddenly released my last hold on the cable and threw myself bodily upon him.

It was the last thing that he had expected me to do, this sudden mad attack on my part, and it took him so by surprise, that before he could make certain of his own grip on the slender cable, my leaping rush had knocked him sidewise from it. He tottered, swayed, and then with a thin scream fell abruptly and whirled

downward into the darkness. For the moment I thought that I too was tottering to my doom, but as I had thrown myself upon my enemy, my elbows had caught on the cable, sustaining me for an instant while he fell, and in the next moment I had reached up and was again hanging from it with my knees, shuddering violently. Hanging there, head downward, I could make out on the metal tree far below a black blotch that I knew was the body of my opponent, but as the ways below were all but deserted, it was my hope that it would not be discovered for minutes, at least.

I knew, though, that my time was short, and in a moment reached up again, and swung on along the cable's length toward the central cone, hand over hand, along that airy pathway, until within a few more minutes I had reached the top of the central cone and was scrambling upon it, breathing a sigh of relief to find it for the moment deserted. On one side of it, was the mass of apparatus I had noticed before, around which a low metal railing had been constructed, and my heart leaped as I saw that the apparatus was in reality a partially-constructed duplicate of the one which had propelled us into this strange interlocking world. The coils and generators and switches were of the same sort, I noticed, but all were far larger in size, and instead of the two big metal disks of our machine, there was, what appeared to be a metal globe, or world-map, different points of which, movable pointers attached to the intricate masses of apparatus were touching. The whole

affair seemed incomplete, as yet, and before its full significance could strike me, I had leaped on toward the endlessly ascending and descending belt, and in another moment was being carried downward by that belt into the interior of the mighty building.

Down it swept me, into the darkness, and then into light, the same long and shadowy corridor where my guards had halted me on my former visit there. As I reached the floor of that corridor, which seemed quite silent and deserted, I sprang quietly off the belt, and then crept forward toward the open door of the laboratory in which Adams had confronted us, and from which a stronger white light was pouring out into the more dimly lit hall. I could hear voices from the inside of that laboratory, high, shrill and vibrant voices, and cautiously I crept to its doorway and peered inside.

In it were Adams and two of the spider-men, busy now about a smaller piece of apparatus similar to those I had seen on the building's top. As they worked upon it they conversed in their odd, high tones. Quietly I waited there, until they had turned for a moment from the direction of the door, and then slipped silently past it, and hurried on down the long corridor, pausing before the section of the wall through which I had seen Rawlins thrust. After a moment's feeling in the shadows, I found the stud on the wall and pressed it. Instantly a narrow slit appeared in the wall, widening into a doorway, and as I stepped into the little room beyond it, there was a rustle as its occupant rose to meet

me. It was Rawlins, his face wondering in the dim light, and when he saw my own, he uttered a low exclamation that I silenced with an upraised warning hand.

"Harker!" he whispered. "How did you get here—"

"Quiet, Rawlins," I told him. "We've got a chance to get free if we can get to the building's top." And briefly I whispered to him of the plan of Nor-Kan to meet us there with his air-boat if he could manage to steal it.

He nodded quickly, his eyes afire, and then motioned me ahead. Once out of the room we set off down the corridor, as silently as possible. In a moment we had reached the edge of the laboratory door, from inside of which there came the shrill voices of Adams and the spider-men. I turned, was about to motion to Rawlins to make a leap with me across the door, when the voices inside came abruptly nearer, and within another instant the three were emerging from the laboratory into the corridor!

Before we could think of retreating down the hall, they were outside, and we had time only to throw ourselves backward to the floor into the shadows, and crouch there in silent prayer that we might not be seen. As we did so, the three had come out of the door, the two spider-men starting off down the corridor in an opposite direction to ours, while Adams, after calling something after them in his harsh, shrill tones, moved back into the white-lit laboratory. In a moment more the two spider-men had disappeared from view around a bend in the corridor,

and we breathed heartfelt sighs of relief. I motioned to Rawlins to proceed toward the belt-stairway now, but he held me back, his face suddenly alight with excitement.

"Adams is alone, in there," he whispered tensely. "It's a chance in a thousand for us to get him, take him as a prisoner with us!"

My heart quickened uncontrollably at the suggestion, but I saw the force of it. With Adams our prisoner, we could halt the completion of his deadly work, could prevent the catastrophe that loomed for our world. "We'll try it," I whispered, "but if he sees us and cries out before we get him, it's all up with us."

Now we crept to the doorway, gazed inside. Adams had returned to the long desk and was again examining the apparatus upon it on which he had been working. His back was turned toward us, and silently we crept into the room, moving forward inch by inch, drawing nearer him like wild beasts stalking their kill. Inch by inch we moved on, silently, until at last we were within a few feet of him, were moving forward upon him with upraised hands. And then, warned by some strange instinct, he suddenly turned full toward us!

His eyes widened as he saw us, and then, even in the instant that we gathered ourselves for a spring upon him, he had given utterance to a high, shrill cry, a vibrant call that echoed through the great building's corridors and halls and was taken up and repeated by scores of other voices. Even at the moment that he cried out Adams had whirled to one side with astounding quick-

ness, was springing out of the door and down the long corridor, and as we leaped after him, Rawlins turned to me, his face livid.

"No chance now!" he cried. "The building's top's our last chance!"

Toward the great ascending and descending belt we ran, while farther down the corridor we saw Adams racing on, a babel of shrill cries loosed throughout the building now in answer to his calls. We reached the ascending side of the belt, grasped the hooks in it, and as we were carried smoothly upward, we saw Adams turning, and with a crowd running down the corridor toward us. Then they passed from our sight as we were carried on up into darkness and then into the light again as we came out upon the flat, round top of the great cone-building. It was quite clearly lighted by one of the near-by radiant white globes, and I saw at once that there was no sight of Nor-Kan or his airboat upon it. He had failed, and our last chance was gone with him!

The despair and bitterness of approaching death settled upon me, as I felt that our fate was sealed, but now I heard a cry from Rawlins, saw him leap to the little metal railing that surrounded the apparatus beside us, saw him tear a section of that railing away by main force, a long metal bar, with which he leapt toward the ascending belt up which we had just come. Even as he did so, one of the spider-creatures, a ray-rod in his grasp, aimed toward us, appeared on that belt. Before he could release its deadly force, Rawlins' heavy metal bar had crashed down upon him and sent him reel-

ing back down into the shaft in a crushed, limp mass.

I tore a bar from the railing for myself and leaping to Rawlins' side, saw a half-dozen of the spider-creatures ascending in a close group, clinging to the endlessly-moving belt. Their brilliant orange rays shot up toward us as they were carried upward but we had stepped back and they could not reach us with the ray from the interior of the shaft. The next moment they had been carried up to its mouth, and then, before they could again release the rays, our two bars had smashed down as one and they too were tumbling downward in a shattered mass of dead and dying. Still they continued to whirl up toward us on the great belt, singly, in groups, in masses.

The moments that followed were moments of madness. Up and downward our great clubs were whirling, smashing through the bulbous bodies as though through egg-shells, sending them down into the shaft in masses of shattered dead, while all about us, it seemed, there hissed and flashed the brilliant orange molecular rays with which the spider-men strove in vain to reach us from the shaft. We heard Adams' voice, urging them on from beneath, but they needed no urging for the belt carried them endlessly up toward us. Such a battle could not last for long, I knew, even while I whirled and struck, for now the city was aroused all around us; shrill cries and alarms were spreading across it, new white lights were flashing into sudden being.

By those lights I could glimpse, all across the city, it seemed, scores

of the spider-creatures leaping toward us along the shining cables, racing across those airy ways above the city toward the top of our central cone. A moment more and their deadly rays would stab forth to annihilate us, I knew. But even at that moment there came a hoarse cry from beside me, and I saw that one of the spider-men on the ascending belt had managed to snatch the end of Rawlins' bar as he struck, had torn it from his grasp and struck him back a blow that sent him to his knees at my side. Before the spider-man could strike again, my own bar crashed down upon him, and I stooped to my friend's side, half-raised him to his feet. Now, amid a wild babel of fierce shrill cries, the hordes from below were sweeping up toward us on the belt unopposed, Adams at their head, while the other hordes upon the cables were racing along the last few yards of their length toward our building top. From beneath, from all about us, the dark spider-hordes rushed upon us, as I half-raised Rawlins to his feet. It was the end, I knew.

Then suddenly a dark, long shape seemed to swoop down out of the upper darkness into the white light at the great cone's top, a strange, long shape upon which I glimpsed a dark figure, a grotesque and bird-like figure, at sight of which I shouted aloud.

"Nor-Kan!" I screamed, and even as I did so, I saw his long air-boat drive down beside us, felt his strong grasp pulling us up beside him. Then, as a score of brilliant rays leapt toward us from the spider-men on the cables and those pouring up

with immense speed, clear of the deadly rays, and in a moment the wild mêlée on the building-top beneath had dwindled and died in our ears as we flashed upward and outward into the night.

Now, as the long, torpedo-shaped little air-boat soared over the great cone-city of the spider-men, its white globes of light beaconing the darkness beneath us, I turned to Rawlins, and found that save for a slight stunning, he had been unhurt by the blow that had felled him. I turned to Nor-Kan, who was at the controls beside me, and returned the smile with which he greeted me.

"You came just in time," I told him. "I thought it was all up with us—that you'd failed to get to your air-boat."

"It was a close thing," he said, "but I managed to get to it." And then he told us, (I interpreted for Rawlins) how he had swung along the cables after leaving me, toward the cone-top where his air-boat lay, making his way to it as I had done, but without my misadventure and combat in mid-air. He had been forced to hang from the edge of the building for many minutes, he told me, before a chance turning away of the spider-guards on its top had given him a chance to spring up and leap into his air-boat, slanting up into darkness before the surprised guards could prevent him, and swooping down upon the cone-top where we battled, just in time to save us.

While we talked, the little air-boat had been driving toward the south at immense speed, and minutes before the last lights of the great city

of cones had vanished in the darkness behind us. Now a pale light was welling up from the horizon at our right, the white light of dawn. As it intensified swiftly we saw that our air-boat was driving southward high above the rolling blue plains, with none of the spider-men or their cities now in sight. As the light increased, through, Nor-Kan turned for a moment from the little craft's controls, gazing anxiously backward.

"You think they're following?" I asked, and he nodded slowly.

"None of their flying-platforms are swifter than this air-boat," he said, "but the city from which we escaped will flash word to all their southernmost cities, on a light-beam system of communication which they have, to watch for us and cut us off as we make for the south. Our only chance is to get to the south-polar realm of my people and inside its barrier before the flying platforms can find us."

With these words he turned back to the air-boat's controls, and we kept a tense and constant watch upon the surrounding horizons as hour after hour the little craft flew south. Nor-Kan, as he told us, was increasing the distance of our flight by taking a zig-zagging course to avoid the cities of the spider-men which lay about us, so that, while we drove southward, the blue-white sun mounted to the zenith, and then was declining again. Far beneath us the surface of this weird world slipped by, the great blue barren plains, the occasional depressions or hillocks that varied their appearance, the great masses of azure vege-

tation which moved slowly and restlessly about beneath us, browsing here and there. Some of the time I spent in imparting to Rawlins the rudiments of the strange language of the bird-peoples which I had learned, but for the most part we occupied ourselves in scanning the air about us for the enemies who we knew were near. Twice we glimpsed, far in the distance, moving black specks that we knew were scouting flying-platforms seeking us, but each time Nor-Kan sent the air-boat down toward the ground to hover motionless until our enemies had passed from sight. A cordon of these scouting platforms would have been drawn up to prevent our escape to the south-polar realm of the bird-races, we knew, and we knew also that to slip through that cordon would be a difficult task.

At last, though, late in the afternoon, Nor-Kan turned to us with some relief on his face. "I think that we've got through them all," he said. "We're south of the last spider-city, now, and within an hour we'll be at the barrier of my own land. Within an—"

He stopped abruptly, the words dying on his lips, as he gazed past us to the right and behind us. We turned, alarmed, and for the moment we stood as appalled as he. Away to one side and behind, speeding after and toward our air-boat in an oblique course, were a half-dozen square black shapes that were now no more than a half-mile from us.

"Scouts of the spider-men!" cried Nor-Kan. "If they overtake us before we get to the barrier we're lost!"

He whirled to the craft's controls,

opened its speed lever to the last notch, and sent the air-boat racing on toward the south in a burst of added speed. The great flying-platforms swiftly leapt after us, hurtling through the air at immense speed and slowly drawing ever closer toward us moving obliquely toward our own course. Closer they came, and closer, air-boat and flying-platforms cleaving the air at a velocity unthinkable; now we saw from the foremost of the platforms behind us a shaft of brilliant orange light that burned toward us as at the same moment Nor-Kan swerved the air-boat to avoid it. He turned toward us, motioned swiftly toward the long, tube-like projector mounted on a swivel at the stern of our own air-boat, and which I had already noticed.

"The static-gun!" he cried. "There are a few charges left in it—try to stop them with it!"

I sprang to the weapon and hastily, at the shouted direction of the bird-man, aimed the long tube at the foremost of our pursuers, and then pressed the button at its base. Instantly a little shining metal cartridge flicked out of the long tube and whizzed through the air to strike the foremost of the flying-platforms squarely. As it did so it seemed to burst, to expand into a faint glow of light that enveloped the flying-platform from end to end. The next moment, from the ground far below, a terrific and blinding flash of lightning had sprung upward and struck the faintly-glowing platform, sending it reeling down in a flaming, shattered mass by that tremendous discharge. The principle of the wea-

pon, as I guessed, was that of the lightning itself, since the missiles it fired contained great charges of static electricity which enveloped whatever object they broke against, giving to that object a powerful electric charge which caused an instant electrical discharge or lightning-bolt, from the ground up toward it, just as a lightning-bolt or so-called "back-stroke" will sometimes burst up from the charged earth toward a charged cloud.

As the foremost of them was destroyed thus, our pursuers seemed to waver a moment, to slacken their speed a little, and then they leaped forward again toward us, their brilliant rays reaching and questing through the air in search of us, while Nor-Kan drove the air-boat up and about in swift, erratic evolutions to escape those rays. I saw him pointing ahead, as he did so, saw far ahead a mass of slender, soaring white towers that glistened brilliantly in the sunlight, and that stretched far away on either hand. I knew that we were approaching the polar land of the bird-peoples, and as we flashed on in mad flight from our relentless pursuers, I could understand the nature of the mighty barrier which the bird-races had erected all about their land to bar the hordes of the spider-men forever.

It was a barrier invisible, almost. It could be seen only by a slight flicker in the air that the eyes could hardly catch, but it manifested itself to our ears in a tremendous roaring sound that grew in titanic volume as we sped on toward it. For it was a barrier of winds that encircled the realm of the bird-people, a wall of

tremendous, ceaseless winds that roared upward from the ground unceasingly with incalculable speed and power, caused by the bird-people by encircling their land with a sheath of the same gravity-opaque vibrations which propelled their air-boats, and which, projected on the ground in a great circle about their land, caused the air above that circle to rush violently upward, freed of its own weight and pressed by the weight of the air on either side, rushing up in a mighty wall of inconceivably powerful blasts which nothing could hope to penetrate, up toward the limits of the atmosphere itself. And we were rushing madly on toward this barrier now, with the remaining flying-platforms close on our track.

Their rays were still slicing the air about us as we sped on, and it was only by a miracle that we escaped them in that moment. I again swung the static-gun toward the platforms, sent another of the deadly missiles whizzing back toward them, and another, and another, before the exhausting of its few charges made the gun useless. The first two of my shots went wild as the platforms behind dipped suddenly, but the third caught one of them as it rose again, and as it too glowed faintly with the sudden charge from the missile, another shattering blast of lightning ripped up from the ground far below to annihilate the platform and all upon it. Even as it whirled downward, though, the deadly orange ray from one of its fellows had swung across our own ship, and though Nor-Kan swerved sidewise with the speed of light, al-

most, the brilliant ray sliced down across our air-boat's side, annihilating a section of that side, so that our speed slowed considerably. Ahead now the mighty walls of winds, roaring upward like the unceasing thunder of doom, and drowning every other sound, was not a thousand yards away, and from the ring of the little white projector-stations which controlled it, inside of it, we could see bird-men running out, gazing toward us in excitement. But behind us, now, the platforms of the spider-men were leaping ever closer toward us, their rays no longer in action as they crowded to their platforms' sides, to board and capture us.

Closer they sped on our track, and now were but a scant hundred feet behind us, leaping closer and closer. Nor-Kan, his face set, was driving straight toward the mighty barrier of winds, in which our craft could not live an instant, I knew. Beside us we saw Rawlins' mouth, evidently voicing a cry which I could not hear for the thunderous roaring of those winds. We had almost reached them, now, sucked forward by the onrushing currents that fed them from either side, the platforms behind still whirling after us, and then I half-closed my eyes as our air-boat plunged in toward its death in those terrific currents.

But as it did so the mighty roaring abruptly ceased, the winds for the moment vanished, as the gravity-sheathing vibrations which caused them were suddenly switched off, inside. We rocketed through and over the projector stations inside, and then the next moment the vast

currents were thundering upward again with all their former power, while the pursuing platforms of the spider-men, a hundred feet behind us, drove straight into the terrific barrier.

We saw them whirl sidewise with lightning-like speed as though jerked up by a giant hand, saw them crumpling and collapsing as the vast winds whirled them upward, and then they had vanished far above, smashed utterly and flung upward in less than a second of time, by that mighty wall of moving air through which nothing, Nor-Kan had truly said, could ever pass and live.

Now, as our own air-boat drove in over the ring of projector-stations from which the barrier had been switched off so opportunely for us, I saw that from the city of white towers ahead swarms of other air-boats like ours, many of them much larger, had risen and were speeding toward us. Rapidly Nor-Kan hailed them, and as they turned to carry back to the city news of our arrival, we limped on toward that city in our battered craft.

A far-flung mass of soaring white towers it gleamed in the light of the descending sun, and in the distance beyond it I glimpsed other masses of similar towers, other cities of the bird-people, all gathered here behind the impenetrable barrier in this polar realm that was their last refuge. Now, as our craft slanted down into the city, down between the soaring towers toward the base of the greatest of them, I saw that in the wide streets beneath us were gathered masses of the bird-people, all of the same appearance as Nor-Kan.

As our air-boat came to rest at the base of the mighty building, we stepped off it, into those swarming, wondering masses, as grotesque-seeming to our eyes as we must have been to theirs, and were led by bird-men whose leather straps bore a peculiar insignia, into the building before us. There, with Nor-Kan, we were conducted into a long, bare white room, with high ceiling and high-arched windows, in which the only furniture was a great rectangular white block at the room's center, about which, as about a table, were grouped a dozen or more square seats.

At the end of the block was seated a bird-man of the same appearance as all the others we had seen, but with a commanding aspect and expression which silently proclaimed him a person of authority. He greeted Nor-Kan calmly as he entered, spoke to us with an interest and wonder his features could not conceal, and then turned from us as into the room a dozen or more other bird-men entered, whom he also greeted briefly, and who then seated themselves, with us, around the great block-table at the room's center.

Nor-Kan had informed me that this was the ruling committee of the races of the bird-men, each of their cities being represented upon it, and that it was in response to his own summons that the members had been hastily assembled. Now, as they seemed to wait in silence, he rose to address them. He told them, briefly, of his own capture by the spider-men, of his meeting with me, and of our hazardous escape from the spider-city. He stressed the fact that

Rawlins and I had come from a world interlocking with their own, and though there was wonder on the faces of the bird-men, I saw that their own science was great enough to enable them to appreciate the possibility of the two worlds interlocking in this manner. Then Nor-Kan explained that Adams, a human like ourselves, had joined the spider-men, and was planning to transpose all their cities, all the hordes in those cities, into our own world, to conquer and destroy, having set up ray-projectors for that purpose beneath each of the spider-cities, and being now engaged in completing the central control for all those projectors, which was located on the top of the central cone where we had confronted Adams. That central cone itself, as Nor-Kan told them, would not be transposed into the interlocking world, being protected from the rays, but all the city around it and all the other cities of the spider-men would be so transposed.

"And that means defeat and destruction for ourselves, as well as for Rawlins and Harker and their races," said Nor-Kan. "Hitherto our mighty barrier of winds has kept the spider-men from entering our realm, since none of their flying-platforms could ever pass it, and our cities and stations from which it is projected are set too far back from it for their molecular rays to reach. But if they burst into this interlocking world of Rawlins and Harker, then all that they will need to do is to fly south to the polar regions of that world and be transposed back into this one, and they will be inside our barrier, leaping upon us and de-

stroying us. There is but one chance for the races of the bird-peoples, and that is to destroy the ray-projectors which Adams has built to transpose their cities into the interlocking world, and to do that we must gather all our forces and sail north, must swoop down on the city where Adams is working now at the completion of the controls of his deadly mechanisms, and must destroy them before he can finish them, before they can flash the spider-cities and all their hordes into the interlocking world."

There was a silence in the room when Nor-Kan's deep voice had ceased, a strange stillness broken only by the hum of distant voices that came whispering into the room from the anxious masses of the bird-people that had gathered in the streets outside. In the decision of the committee and its leader, we knew, there rested the fate of both interlocking worlds and in a tense silence Rawlins and I waited for that decision. At last the bird-man at the table's end rose and slowly spoke.

"For age upon age," he said, his deep voice vibrating through the room, "we races of bird-peoples have clung to our refuge here at the southern pole, have sheltered ourselves behind our barrier while our ancient enemies, the servants whom our own ancestors developed to be their doom, have mastered all the rest of this world, which once we mastered. Fewer than the spider-men in numbers, pressed by their hordes down into this last refuge at the southern pole, we have not thought of attacking them in force, but have been content to defend

ourselves. But now, as Nor-Kan has told you, we must attack and defeat them, or perish. So that now, as ruler and leader of the races of bird-peoples, I say that all our forces shall be gathered together here as swiftly as they may be gathered, and shall sail north to attack the spider-men and destroy the deadly thing that Adams has built for them, shall flash north to strike with all our power the one great blow which alone can save from the spider-men the two interlocked worlds!"

Chapter V

As our craft slanted up into the sunlight above the towering city of the bird-peoples, two days after our arrival at that city, I saw, rising below and beside us, score upon score of long air-boats like our own, literally hundreds of craft, each manned by a score or more of bird-men. During the two days we had spent in their city those fleets of ships had been gathering there, racing on in answer to the call from each of the bird-people's cities in this strange realm at the pole. More than a thousand in number, they had massed at this northernmost city of the bird-people, each ship equipped with static-guns and with other weapons that had been hastily devised for them.

During those two days, too, Rawlins and I had seen but little of the city of the bird-people, for Nor-Kan had been appointed as leader of the whole fleet, and we were busy with him in devising a plan of attack. We had decided that our best plan would be to head straight toward the

spider-city, where we had been imprisoned, and where we knew Adams was laboring to complete the controls of his apparatus on the central cone, to transpose to our earth the spider-cities and their hordes. Once at that city we were to sacrifice all else to destroy that central cone and the deadly apparatus upon its top, and it was our hope that by the fury of our attack this end might be accomplished.

Now, as Rawlins and I stood with Nor-Kan on the sunken, sheltered deck of the long air-boat that was the flagship of the fleet, we could see all our myriads of craft rising around us, slanting up with us until the great fleet hovered momentarily above the soaring white towers of the city of the bird-people. Swiftly, as the signals flashed from our own craft, the air-boats gathered themselves into a fighting formation, arranging themselves in three long lines not far apart, and then as another signal flashed, the whole fleet with our flagship in the van, began to move out over the city, smoothly and silently, toward the north.

Looking down I saw the streets and squares of the splendid city below us thronged with crowded masses of its inhabitants, watching in silence as their silent fleet moved out to battle. Glistening, shining, in the brilliant morning sunlight of the blue-white sun to our left, the hundreds of long, graceful craft were an inspiring sight as they moved steadily forward, and I saw pride in the eyes of Nor-Kan as he glanced back over the shining files that followed us.

"Never before has such a force of

my race gone out against the spider-men," he said to us, "and for that reason our attack, I think, will be a complete surprise to them, so that we can swoop down upon them before they're aware of our presence."

I nodded, without answering, for by this time we were approaching the great wall of winds whose thunderous roar made all speech difficult. Nearer we sailed toward it, high above the ground, and the roaring of the mighty, invisible barrier was deafening, when abruptly as before, it ceased, the winds subsiding, as the projected vibrations opaque to gravity, which caused them, were snapped off to allow us to pass. Onward our fleet smoothly sailed, through the air where the wall had been, and then, as the last of our ships came through and beyond its circle, the vast winds again sprang into sudden being, roaring upward again with renewed and deafening power.

Now our fleet was moving faster, was rising into the air, until we were flashing northward almost at full speed, and at a height of perhaps a mile above the ground. Behind us the towers of the bird-men's polar cities faded out of sight, while we sped north above the blue plains toward the spider-city that was our goal. Far below we could make out the same weird landscape over which we had flashed on our wild flight southward, the strange vegetation that moved on it, being the only sign of life, as before. Hour after hour, we sped on, evading the southernmost cities of the spider-men as we had done on our own escape, heading straight toward the city where

was Adams and the thing of dread that he was completing. Even yet, we knew, a delay of minutes might doom irretrievably our own world and this interlocking one.

Abruptly I was aroused from these gloomy musings by a wild shout on one of the air-boats just behind our own, and as I stared about I saw swooping down upon our fleet from high above, a dozen or more of the great flying-platforms, that had evidently been scouting high above us and were now plunging straight toward us. For the moment there was only wild confusion in the bird-men's fleet as their ancient enemies flashed down upon them, and that moment was used with a deadly advantage by the spider-men above. For as they drove down upon us, shaft upon shaft of the brilliant orange ray was searing down to cut lengthwise along our fleet, sending a score of our ships into instant annihilation before we could recover from the shock of that staggering and deadly attack.

As the platforms whirled down above us and up again for another plunge, though, Nor-Kan cried out a sharp order, and from our own ship and the hundreds behind us, a hail of deadly missiles from the static-guns whizzed out toward the speeding platforms, that had now drawn some distance ahead of us. So innumerable were the missiles fired, and so close was the distance, that before the platforms could flee, all but three of them were glowing with faint light as the shots struck them and charged them, and then from beneath, bolt upon bolt of shattering lightning had leapt up from the

ground far beneath and struck the glowing platforms in blasting bursts of dazzling electrical fire, so that they whirled down in riven, blackened masses toward the ground.

The three platforms which had escaped the missiles were racing northward away from us, now, at their highest velocity, in an attempt to escape, and up toward and after them leapt a score of the swiftest of our craft. We saw the orange rays of the three burn back and annihilate several of the pursuing boats, but as they disappeared in the distance ahead of us, we saw the static-guns hit their mark in two cases, at least, as two of the fleeing platforms were struck by the terrific lightning from beneath. Then the remaining platform and the pursuing air-boats had vanished from sight, and when some minutes later the air-boats returned, it was to report that the platform had escaped them, due to its start upon them, and had vanished while still heading toward the north.

"No surprise now!" exclaimed Nor-Kan grimly, as our great fleet leapt on. "We may get there, though, before the spider-men can gather their fleet!"

At the highest speed of which our ships were capable, we drove northward, now, for we knew that the escaping platform would spread the alarm instantly and bring down upon us all the overwhelming forces of the spider-men, from all their scores of cities. Our only chance to accomplish what we sought, was to reach the spider-city, which was our goal, before the enemy could assemble, and so now it was in a tense race against time that our thousand

ships sped north. Faces set and tense, Nor-Kan and Rawlins and I stood on the flagship's deck, gazing away to the north while the blue plain far below unrolled with unvarying speed, and while the long files of ships behind us, their formation a more compact one, now drove through the air on our tracks.

On we flashed, toward the north, while hour followed hour and while the sun climbed up to the zenith and was slipping down again. Then abruptly Rawlins raised his hand, with an exclamation, and pointed away toward the horizon ahead. We all gazed, with hearts suddenly beating more swiftly, and then Nor-Kan had turned, had given an order, calmly and quietly, and our whole great fleet was slanting up toward a still greater height. For there, far ahead of us, there hung in the haze above the horizon a long, wavering line of small black specks, specks that were rapidly growing larger, growing distinct in shape as square black platforms, as they rushed toward us. It was the spider-fleet!

On they came, in a long, curving line of length so great that its two out-curving horns could hold within them the whole mass of our own fleet. A full five thousand platforms must have been in that mighty line, we knew, and at the sight of such overpowering odds a closed hand seemed to hold my heart tightly. Then, as the two fleets rushed madly together, the despair that had gripped me vanished, and in a strange calm, as if I had become an impersonal spectator, I watched the nearing swarms of platforms.

In a great semi-circle they were

flashing toward us, now, and as they came nearer innumerable dazzling streaks of the brilliant molecular ray burned out from them, shafts of orange light that cut through the air toward our ships like questing fingers of death. I heard hoarse shouts about me now, saw ship after ship of our fleet vanishing as the slicing, whirling rays reached them, but before more of the platforms could fire upon us, Nor-Kan had snapped a quick order, and as a signal flashed from our flagship our whole fleet veered sharply to one side, and instead of moving on between the out-curving horns of the spider-fleet's formation, which would have exposed us to the concentrated rays of all their platforms, we sped past the rim of the semi-circular formation, which screened us effectually from the rays of the greater part of their fleet.

As we flashed past the outer side of their formation thus, there leapt out from the massed static-guns of our air-boats hundreds of the metal missiles, the majority of which struck the platforms they were aimed at, and the next moment while those platforms, glowing now with the static charge, leapt upward in an effort to escape, there flashed up from beneath them the destroying bolts. I heard a crazy cheer from the bird-men on the craft about me as our fleet, still holding its formation, wheeled quickly to speed back upon the spider-fleet's other side and repeat our maneuver, for literally scores of their platforms were whirling downward in flaming masses as a result of that skillful attack. Before we could repeat it, though, they had

seen our intention, and as if in answer to an order, their formation abruptly broke up completely, and in a disorganized vast swarm of single platforms, they turned and leapt upon us.

It was a tactic which we had not anticipated, and for the moment it took us at a complete loss. Before any order could be formulated to meet the change in the situation, the flying-platforms were rushing upon and among us, in compact groups, and then as their rays whirled about and cut great lanes of destruction among us, our own formation vanished and our ships sought individual opponents among the myriad platforms that were speeding upon and among them.

The next moment it seemed that our flagship was lost in a whirling, tossing sea of striking and struggling ships and platforms, a hell of battle raging about and above and beneath us, stunning to the senses. Our from the omnipresent groups of platforms streaked the deadly orange rays, whirling and stabbing, their effects not noticeable at once, except for the empty gaps that opened abruptly in the field of battle, where air-boats had been but a moment before. And from our ships in turn leaped the shining cartridges of the static-guns, platforms all about us glowing faintly as the missiles struck them, and bolt upon bolt of crashing lightning leaping up from the ground far beneath to strike those glowing platforms.

From all about us, it seemed, the orange rays were flashing toward our own ship, the flagship, and it was only the skill of the bird-man

at the controls that saved us from annihilation in that mad moment. With tremendous speed our craft dipped and twisted to avoid the whirling rays, our own static-guns raining shining missiles upon the surrounding platforms, but even so one of the stabbing rays struck close enough above our decks to instantly decapitate a half-dozen of the bird-men at the static-guns. At once I sprang with Rawlins to the guns, and while Nor-Kan, as calmly as ever, shouted his orders behind us, we swung the guns upon the platforms that swooped and circled about and above us, and whose rays cut crazily through the masses of struggling ships.

I saw one of the big, square platforms leaping toward us from the right out of the ruck of the battle, and in that wild *mêlée*, I seemed to observe it with photographic clearness and accuracy in that instant, the cylindrical mechanism at its corner, the score of hideous, many-limbed spider-men crouched upon its surface, the ray-tubes along its sides, all microscopically clear before my eyes. Then as it flashed toward us and as I saw a spider-man upon it gripping his ray-tube and swing it full upon us, I swung the static-gun in my grasp straight toward him and before he could loose the ray, the missile from my gun had spread a glowing light over the platform and the crashing lightning-bolt from far below had smitten it and changed it into a fiery mass of fused metals and charred bodies that tumbled crazily downward.

As it did so, we were thrown violently to the deck, as our craft

swerved sharply sidewise, just in time to escape a slender shaft of the brilliant orange ray, that grazed up past us and demolished a struggling air-boat above us. In the next moment, the platform from below that had loosed that ray was struck by a blasting bolt from the ground as an air-boat beside it struck it with one of the static-missiles. And then that air-boat, in turn, had vanished, hit in that unguarded moment by a ray from its other side. As it did so I heard Rawlins cry out, point upward, and saw hovering directly above us one of the platforms that was swinging its ray-tubes down toward us. There was no time to swing up our own static guns, no time to swerve aside, but the next moment the bird-man at the controls had jerked them sharply back and sent our air-boat racing upward, its sharp prow striking the edge of the platform above and tipping the big flat square sharply over so that it swung clumsily in mid-air for an instant in that position. Then a shining missile had struck it and a crashing bolt from far beneath demolished it as our ship drove up above the battle.

Up we flashed, up until the field of the battle stretched a thousand feet below us, a mighty, far-flung mass of whirling platforms and air-boats, of stabbing orange rays and lightning-flashes from beneath. Platform after platform had reeled down, struck by those tremendous bolts, but the tremendous disparity in numbers had told against us and now but a half or less of our original fleet struggled below us, against platforms many times their num-

ber. Such an unequal struggle could not last for long, I knew, but now I heard Nor-Kan utter a short order, and as a series of signals was flashed from our flagship, circling there above the battle, there flashed up to join us a dozen air-boats which until then, by his orders, had taken no part in the struggle.

As they drove up beside us, I saw that these were the craft which the scientists of the bird-people had hastily equipped with a newly-devised weapon of which I knew nothing, a long, blunt black cylinder that was mounted at the prow of each air-boat. They gathered about us, then turned the cylinders down upon the flying-platforms that were swarming in fierce attack upon our air-boats there below. As they aimed the blunt cylinders, there came from them a loud humming, but no other evidence of operation. Looking down, though, I saw the platforms below at which they were aimed tumbling helplessly down toward the ground, far below, reeling down in crazy destruction toward the blue plains, while all about us the bird-men cheered madly. Over their shouting, Nor-Kan explained to me that the blunt cylinders were similar to the cylinder-mechanisms upon the platforms themselves, which propelled those platforms by giving them a powerful magnetic charge which caused them to be attracted by this world's magnetic poles. The blunt cylinders on our air-boats, in turn, gave to the platforms at which they were aimed an equal charge of opposite polarity, and the two thus equalizing each other, the platforms were attracted by neither pole and robbed of their

sustaining and propelling powers, tumbled down to destruction on the ground far below.

Platform after platform was falling now, while from our air-boats below the static-guns were vomiting a rain of deadly missiles upon the spider-men who still opposed them. Swiftly the odds were changing, and now it seemed that within a few minutes more the battle would be over, since but a scant few hundred of the platforms were left. Abruptly, however, these massed together, seemed to pause for an instant. Then we saw a group of the spider-men massing around a small globular apparatus on one of the platforms, and even as we turned our weapons upon these massed platforms, even as the air-boats below leapt toward them, we learned the reason for action, and learned that they too had weapons of which we knew nothing. For before either our magnetic cylinders or the static-guns of the air-boats below could be trained upon them, all light about us suddenly vanished, plunging us into a rayless night, in which there gleamed no single spark of light!

From all around us and from far below, we could hear cries of dismay and fear from the bird-men on our air-boats, as the blazing white sunlight about them gave way in an instant to that impenetrable darkness. The nature of that darkness was plain enough; it was obviously produced by some apparatus of the spider-men which killed the vibrations of light by opposing to them a dampening vibration, extinguishing every ray of light over an unguessed area. Blindly we drifted through that

torturing darkness, and from below we could hear shattering crashes as our air-boats collided with one another in that darkness. Then I felt a wind on my face as our craft began to move swiftly through the darkness, at an order from Nor-Kan, and a moment later it burst abruptly out of the darkness into the fierce white light of day.

Behind us lay the dark area, like a vast blot of blackness in the heavens, produced by the apparatus on the platform that must still have hovered at its center, but now we saw that the other platforms, no more than a few hundred in number, had taken advantage of the concealing darkness they had thrown about them to flee, since away to the northward their dark shapes could be seen diminishing as they sped from us. Our own air-boats were gropingly emerging from that lightless area, now, and as they gathered about us again, Nor-Kan shouted an order and we raced northward after the fleeing platforms, only a score of our own ships remaining and firing static-missiles into that dark area in an effort to destroy the platform with the apparatus which produced it, inside. As we sped away, I saw the blackness suddenly vanish, and knew that their missiles had found the lurking platform inside it, and then they were speeding along with us in hot pursuit of the flying shapes in the distance.

On we flashed, a fleet still over five hundred strong, while far ahead of us the remaining scores of platforms fled. "They're making for their city—the city where we were!" Rawlins shouted in my ear, over the

roar of the wind that was about us now as we raced on. "They must know that Adams is almost ready to transpose their cities and them, into our world!"

I nodded mutely, my eyes upon the dark, flashing shapes ahead, and I saw, beyond them, the looming, gigantic cones of the spider-city where we had been imprisoned. The dark, mighty cones, the tremendous wall about them, the cables that led from the top of the cones to each other, all were as they had been, though now those cables and the streets beneath were swarming with innumerable hordes of the spider-creatures, racing about in wildest confusion as their shattered fleet drove down toward them. And down after that fleet our own ships flashed, down until we were within hundreds of feet of the tops of the mighty cones, down until we could see the clearing at the city's center, and in it the single cone, and upon that cone's top a single dark figure who was working madly with the connections of a great mass of apparatus before him.

"Adams!" shouted Rawlins, pointing downward, and I too shouted as I saw what was happening, saw that now, at the last moment, Adams was struggling to complete the last details of the controls which would in a moment transpose all the mighty city around him, and all its hordes, and all the other hordes and cities of the spider-men, into our interlocking world. Down toward that central cone our whole fleet swooped, but up to protect it there rose the last few hundred ships of the spider-men's fleet, the last few hundred

platforms that came crazily up toward us in a last wild effort to hold us back from that building-top below where Adams was working madly to complete the connections of the apparatus that would give to them another world.

Up they came toward us, and the next moment we had met them and over the city of the spider-men there was swift, terrific battle, orange ray and static-missile leaping from air-boat to platform and from platform to air-boat, craft of bird-men and spider-creatures alike smashing down to death in the city below them. Above the top of the central cone there hung the last of the platforms, resisting with the mad energy of despair all our efforts to reach it. All about us air-boats and platforms alike were reeling and falling and vanishing, amid the fury of that wild combat, but now, one by one, the platforms were being annihilated, and now as a gap opened between them, Nor-Kan, at the controls of our own air-boat, sent it whirling down toward the top of the great cone below us.

As our air-boat swooped downward, the rays of the platforms on either side swept along it, annihilating the last of our bird-men crew and leaving only Nor-Kan beside Rawlins and myself. In a moment more the craft had crashed down at the edge of the cone-top, where Adams, oblivious to the battle above, was working madly on the last of his connections. We sprang out upon the building's top, but as we did so, there poured up on the ascending belt-stairway a half-dozen of the spider-men, leaping between us and

Adams. I saw Nor-Kan strike out in great blows that sent two to the floor, and then, as Rawlins and I were gripped by others, saw him lift one bodily and hurl him down into the round shaft up which the ascending belt moved, down through the building toward its floor far beneath. Then he too was struggling with the remaining one, while Rawlins and I twisted in the grip of our opponents with the madness of utter despair.

I glimpsed Adams, burning-eyed, finishing his connections, saw that the last of the platforms were almost gone, that the air-boats were swooping down toward us. In that moment, though, there came a crazy shout from Adams, and he was leaping toward the metal pillar that rose from the floor just beside the shaft of the ascending belt, was leaping toward the big lever-switch upon that pillar from which ran the connections of all the massed apparatus behind him, the connections, I knew, of all the great ray-projectors in all the cities of the spider-men. I saw his hand close upon that switch, as I struggled helplessly in the grip of my spider-man opponent, and knew that the next instant would see the closing of that switch, the turning on of the projected ray at full force on the city around us and on all the cities of the spider-men, the transposition of all those cities, all those hordes, into the world of man, never to be undone.

But in that moment there came a hoarse shout from Rawlins where he struggled with his own opponent by the roof's edge, and I saw him hurl the hideous figure of that opponent from him with superhuman

force, breaking him bodily upon the floor, saw him leap forward toward Adams, toward the switch. As he leaped, Adams saw him, jerked down the switch with a swift motion, down the graduated slot which measured the force of the ray it loosed. But he was late—an instant late. For as he jerked it down, Rawlins' hand had shot up toward it, had stopped it half-way down the slot, so that instead of the ray's full force, it loosed upon the spider-cities but half that force.

There was an instant of utter silence and stillness, an instant in which it seemed that all motion and all sound in all the world had ceased. Then there broke about us a titanic detonation that was like the crash of meeting spheres, the death-shout of riven worlds. And in that instant the vast city about us, the massed gigantic cones and the cables that connected them, and the streets below and all the spider-hordes in the streets and on cables, all these had vanished, disappeared, whiffed out of existence, so that about this central cone there now lay nothing but a vast depression in the barren blue soil; the city that had stood for ages upon it was gone.

Gone! Gone forever; gone as all the cities and all the hordes of the spider-creatures were gone, whiffed into sheer non-existence when the ray that was to have transposed them into our world, was turned on at half-force instead of full-force, not having power enough to reverse the motions of the electrons in the interlocking masses of matter, to transpose them from world to world, having power enough only to halt those motions, to destroy that matter as

though it had never been. In our own world, I knew, the corresponding sections of matter that interlocked with the spider-cities must have been annihilated at the same moment, but what was that small loss compared to the doom of man's world that had been prevented? What was it compared to the removal forever of the menace of the spider-creatures from the two locked worlds?

As that tremendous detonation died away, Nor-Kan and I had almost at the same moment, thrust from us our opponents, limp and dead, and now we leaped forward to where Rawlins and Adams struggled by the switch. But before we could reach them, we saw Adams thrust Rawlins back, saw him gaze around, a hell of hate in his burning eyes as he saw his work thus destroyed, his vast and evil plans thus thwarted. Then he had whipped one of the deadly ray-tubes from his belt, levelled it upon us, stepping sidewise to loose that death in a sweeping circle upon us. But as he did so, as he stepped unseeingly, his foot encountered empty space—the open belt-shaft beside the switch—and he reeled down into that shaft, only a thin scream coming up toward us as he whirled downward, and then a dull, half-heard thudding sound from far beneath.

We stood motionless, all but senseless, and then saw that the last of the platforms had been annihilated, that the air-boats were swooping down upon us, down upon the top of our cone, the last left of all the vanished city. We stepped to our own air-boat, and began driving up with the others, up above the cone-

top, up until all hovered motionless high over it. Then a rain of shining missiles swept down upon it, the great structure glowed everywhere with faint light, and then from all about it there had leapt crashing bolts of terrific lightning, mighty electrical discharges, that wreathed the great cone for an instant in a shroud of violet fire. Then it had crumbled, crashed, fallen, and as the dust-cloud of its collapse cleared away from the place where it had stood, we saw that only a low mound of shattered, blackened fragments lay there, the last of the works of the spider-creatures, of all their hordes and cities. Then, as we hung there, we became suddenly conscious that in all the world at that moment there reigned a tremendous silence.

Chapter VI

It was days later that Rawlins and I, standing in the little crater where first we had found ourselves in this strange world, bade our friends, the bird-people farewell. Those days following the destruction of the spider-creatures and their cities, we had spent in the polar land of the bird-men, and there, with the help of their scientists, we had constructed a transposition-apparatus, like that by which we had come into this interlocking world from our own. Now, standing there in the hot white sunlight at the little crater's bottom, with the big disk-apparatus behind us, we faced the scores of bird-men who had come north again with us to this spot to see us go.

One by one, in their deep tones, they wished us well and tried to express their gratitude for what we

had done for them, assuring us that when we had gone, the transposition-apparatus would be destroyed, and the last link between the two interlocking worlds on their side would be severed. One by one we took our leave of them, there in the brilliant light of the blue-white sun above, and then last of all of them, Nor-Kan came forward, his face strangely still and solemn, and gripped with his taloned hands, the hands which we outstretched toward him; he stood thus for a moment in silence.

"Goodbye, Rawlins—Harker," he said. "We are different far, bird-man and human, but we have fought and dared together, at least. And together we have helped to save our worlds."

We wrung his taloned hands, without speaking, and then turned toward the big disk-apparatus behind us, the masses of apparatus to which it was connected. Slowly we stepped upon the lower disk, and then, more slowly still, Rawlins reached out toward the switch. He grasped it and then, even as we had done before, we paused, glancing around for a last time at the weird, wild landscape that we should never behold again—Nor-Kan and the other bird-men gathered about us in the dazzling white sunlight, on the blue ground studded with shining pebbles, with the slowly moving patches of blue vegetation. Then Rawlins jerked down the switch.

Again, from the disk above us, a blinding white light poured down upon us, and as it flooded through us with the same titanic force, I had a last glimpse of the weird landscape revolving about me with immense speed, and then it had vanished, as

we seemed to be sucked down into a roaring maelstrom of darkness, on which I involuntarily closed my eyes. The roaring lessened, the wild motion that had thrilled me died, and slowly I opened my eyes again. And, even as I had expected, I found myself with Rawlins beside me in his little laboratory, its electric lights still burning and its door still tightly locked.

Beside us there stood the big disk-apparatus by which we had gone into the interlocking world after Adams, and in a moment we had dismantled it, had smashed its delicate actuating apparatus with heavy blows, had closed forever the last gate between the two interlocking worlds, the two universes, a gate which it was never meant for man or any other to open or pass through. Then we left the little laboratory, the big building, and paused outside on its steps.

It was night in the world outside, as when we had left it, a softly scented summer night in which the only sounds were a few distant voices, and the whispering of the breeze. We had no thought, in that moment, for the strange wonder that would be stirring this world concerning the cataclysms that had blasted it out of the unknown, had no desire to explain to that world how through those cataclysms had it and the world locked with it been saved from a dreadful doom. We wanted only to stand there, in that moment, silent, motionless, with the cool wind upon our faces, and the soft, familiar sound of human voices in our ears, and above our heads the calm, unchanging splendor of the stars.

The End

THE GENIUS

By IVAR JORGENSEN

Once upon a time (not so very long ago considering the age of the Earth) man was little more than the beasts of the jungle. He was frail of body, weak of spirit, quick to age. But he had one thing to distinguish him from all other forms of life: the gift of imagination. So, painfully and at the cost of his blood, he laid the groundwork for the cotton gin, atomic energy—and the Cadillac Eldorado!

ZALU'S time of fear had come. It had been upon him for several seasons now, and as one followed the other, his fear deepened because he knew the moment was coming ever closer when Cabo, his grandson—the Master of the cave—would suddenly seize a club and drive him out.

The driving forth of an old one was as certain as the rising of the sun, but it occurred at no fixed time. In some cases, where the Master of a cave was particularly stupid, an old one could stay around until he — or she — scarcely had the strength to move. Then one day, the Master

would see him raise a bone to his lips and suddenly realize the old one no longer brought in the carcass of Malu the deer or even carried water from the river. Then the Master would rise up and smash his club down on the old one.

Perhaps the old one would not be able to dodge the blow and would die instantly. In that case the body was dragged to the place for dying and left in bleak solitude until animals came to tear away the scant flesh. Sometimes the animals would wait until the old one had expired and sometimes not.

If the Master of a cave was

intelligent and alert, however, an old one had a harder time—was often driven out while still active and healthy, but too weak to stand for long against the beasts that skulked around the dying place in search of food.

Such was Zalu's fear; for Cabo was not only alert and intelligent, he was also mean and selfish. He watched the food jealously and sometimes even his mate and children had it snatched from their mouths.

So Zalu did his level best to be helpful. He ate sparingly and brought water from the river even though he often fell to his knees under the load. He stayed out of Cabo's way as much as possible and cried for the days when he himself had been a great hunter and had brought meat home to his mate and children.

But Cabo could be fooled only so long and one day Zalu made the mistake of reaching for meat when there was but one piece left with Cabo still hungry. Cabo looked up, scowling. His eyes settled on Zalu and the old one knew that his moment had come.

Cabo snarled, "You fill your belly and bring nothing to the cave."

Zalu withdrew his hand. "I

bring water," he said. "I bring much water."

"Water! That is work for the women! You are too old to hunt and bring in food."

"I am not!" Zalu cried, sick at the thought of the dying place and the beasts creeping in belly-down to gnaw at his bones. "In my youth I killed Robu the tiger. I killed him with my club and brought his carcass home to my mate!"

"But you are no longer young and now I have to feed you!"

"I can still kill Robu. I am still a great hunter!"

Cabo was the kind easily thrown into a rage and Zalu's desperate words sounded to him like defiance. With a roar, he seized his club and sprang across the cave.

Zalu howled in terror and sought to escape death at Cabo's hands. He almost succeeded, but his weakened muscles betrayed him. He slipped at the mouth of the cave and fell headlong.

The club of the Cave Master smashed downward toward his skull. Screaming, Zalu tried to roll from under. Again he was a trifle too late. The head of the club snapped the bone of his shoulder and turned his scream of fear into one of pain. He rolled over



and lay helpless, completely exposed to a second blow of the club.

But a whim of the moment turned Cabo from the kill. Heads had popped out of other caves as the dwellers realized an old one was being slain and they crowded over each other to see the kill.

Cabo liked attention and probably felt he could hold it longer by dragging the affair out. This he did by grabbing Zalu's ankles and hauling him down past the caves toward the place of dying. He strode along with his head high as though he had killed meat and was bringing it home. One of the dwellers laughed. Another took it up, then another. Cabo, thinking the sound came from admiration of his act, grinned and threw out his chest and pulled Zalu roughly along with the other dwellers following. When he got to the place of dying, he picked Zalu up, raised the old one over his head and threw him down cruelly on the pile of bones.

Zalu again screamed in pain and Cabo cried, "Stay there and die, useless one! You will make a meal for Robu before the sun sets and rises again!"

With that, he marched off toward the caves with all the dwellers following along be-

hind; laughing at the memory of how Zalu looked being hurled down onto the bones.

So great was Zalu's fear of the dying place, that he expected to experience death immediately. He lay there cringing from the pain, waiting for the end. But the sun passed over the sky and he still breathed and even the pain in his shoulder lessened somewhat.

I am not old, he thought. The old ones who are put here die quickly, but I am still alive and strong. Cabo made a mistake in dragging me here. I am too young to have my bones cracked by Robu's jaws.

If there was only a way I could show Cabo he is wrong. If I could only bring meat to the cave and hear the cries of those who would envy me. Then Cabo would be sorry and give me an honored place at the fire and I could reach for all the meat I could eat.

Zalu lay shivering, thinking thus, and as the sun sank low he heard the growls of Robu skulking at the edge of the burial ground. His terror was pitiful as the snarling continued and the growling smote his ears like the wail of doom sounding for an old one who was too weak to hunt and good for nothing but to die.

The sun went down and the

night grew chill. Zalu shivered and crawled under a pile of bones seeking warmth. But the bones did not stave off the cold and before long his legs and arms were numb. Still the snarling and growling continued and as time passed and Robu did not come for him, Zalu began to wonder.

The great tiger usually came from nowhere and was upon his victim in a flash. But this tiger stayed in the shadows, snarling and growling.

Zalu did not understand this. Was it the dwellers, hiding where he could not see them and making noises like Robu in order to see his fright? He did not think so. They would not stay out in the cold just to laugh at an old one. Then Zalu saw a shadow slink near and was sure his time had come.

But the shadow faded back and growling began again. Until Zalu could stand it no longer and screamed, "All right, Robu! Come and kill me! I am lying here helpless! Come and sink in your great teeth and end this misery for me!"

But Robu did not come and after a while Zalu drifted off into a restless sleep, brought on from sheer exhaustion.

The warmth of a new sun and the pain of his shoulder joined to awaken him. Those things and perhaps something else: Robu! Squatting on his haunches not two arm lengths away, the great tiger bared his fangs and looked at the old one.

Zalu cried out in surprise. Then, in a spilt second, he decided that he was not going to die like an old woman! He would die like a hunter, fighting to the death!

With another cry, he sprang up, in spite of the torture in his shoulder, and seized a rock and hurled it at Robu. It was a far larger rock than any old one could have hurled without the terror of death in his heart, but the terror added strength and the big rock sailed through the air.

Robu snarled anew and tried to dodge, but his front legs slipped and he fell and the rock crashed down on his shoulder—just as the club of Cabo had smashed against Zalu's shoulder at the mouth of the cave.

The tiger tried to arise, but his legs gave under him and now his roars of rage were terrible to hear. But otherwise, he did not act like Robu at all. There was no death lunge, no great dripping jaws, and in spite of the dreadful

tiger screams, Zalu realized something that made him forget even the pain in his shoulder.

Robu was afraid!

With a snarl of his own, Zalu seized up another rock and advanced on the tiger; advanced right into the gaping jaws and brought the rock down with all his strength. He did this again and again until he was too weak to raise the stone; until all the false strength had vanished.

But by that time, Robu lay quiet, his jaws still open, the great teeth still bared; but no longer dangerous, because Robu was dead.

Zalu sank to the ground in a spasm of weakness and pain. He did not feel the pain, though, so great was his happiness and exultation.

He had killed Robu the tiger! He had met the terrible saber-toothed killer in combat and had defeated him!

He — Zalu — was still a mighty hunter.

His joy almost blinded him; it was so bright. Now what would they say at the caves? How they would envy him when they saw him as he really was! A great hunter who had risen up from the place of dying to go forth and slay Robu and bring his carcass to the dwelling place.

Zalu lay back regaining his strength, giggling in happiness at the thought of Cabo's face when he—Zalu—came in with Robu over his shoulders!

He could not wait any longer. He got to his feet and bent down and seized Robu's huge head. It did not rise so much as a finger span from the ground. Zalu tugged and hauled until he was crying from the pain of his broken shoulder. Then he sank to the ground, knowing he could never throw the tiger over his shoulder and carry it in triumph to the caves.

But he *had* to show them. There *had* to be a way. He could not fail after actually having killed the tiger. It was unthinkable.

Zalu laid his face on the ground, and though he knew it not, he was praying.

After a while he opened his eyes and then, a little later, he realized he was looking through a piece of dead tree trunk that had rotted away in the center. This meant nothing, however, until the log rolled away when he leaned against it to arise. He stopped and stared at the log for several minutes and an idea was born in his mind—a solution to his problem. He got to his feet and began

working swiftly, his shoulder forgotten.

He placed the hollow log at one side of Robu's carcass and found another one to place on the opposite side. Then he thrust a stick through each log so that their ends extended beyond the ends of the logs. Now he laid two more sticks in the other direction, so that he had a square with the ends of his second pair of sticks lying on the axles extending from the hollow centers of the two logs.

Now, he got other sticks and pushed them under Robu's carcass. The ends of these he placed on his two cross-bars that lay on the axles of his square wagon and he was able to gradually raise the carcass free of the ground.

Next, trembling with eagerness, he hooked the crotched end of a dead tree branch onto one of the supporting sticks at the front end beneath the tiger's head.

He held his breath and pulled.

The ground was fairly level and had a down-slant toward the caves, and the hollow logs turned as a result of his efforts, the weight of Robu holding the axles in place.

It was not easy work, dragging the rude conveyance to the caves, but Zalu managed

it, much of his strength coming from the anticipation of the envy he would engender among the dwellers.

When he hauled the body through the open space, the dwellers came out one by one to stare. Zalu ignored them, toiling on, waiting for their shout of admiration.

The dwellers were busy staring at the new contrivance upon which an old one could pull the carcass of Robu and there was no sound.

Until Zalu got to Cabo's cave and dropped the forked stick with which he had pulled the wagon. He smiled and waited for Cabo, who had come out of the cave, to invite him in.

But Cabo did no such thing, and at that moment, a shout of laughter went up from the dwellers. This was evidently the funniest thing they had ever seen.

Zalu turned on them in fury. "Be still! I am a great hunter! I have killed Robu and brought his carcass to the cave! Can't you see what I've done?"

Cabo's fury was terrible to see. "You have smashed the head of a sick old dying animal and dragged it to my cave. A child could have done the same. Behold how the carcass smells!"

Zalu turned to stare at the body on Malu. "He was alive! I killed him! He snarled at me!"

"He whined at you. Your feeble ears could not tell the difference! I took you to the place of dying and you come back to shame me, old one!"

And with that, Cabo raised his club and smashed it down on Zalu's head. Striving to regain face with the dwellers, he picked up the bodies of both the tiger and Zalu and threw them over his shoulder. He stood up straight, scowling, and yelled, "I will teach an old one to make me a thing for laughing!" and he strode majestically back to the place of dying and threw both bodies down on the pile of bones.

Then, as if to vent his rage, he picked up a great rock and smashed it down on Zalu's head.

Back at the caves, however, the incident was almost forgotten, all attention being on the strange contraption upon which Zalu had brought in the body of Robu. Several children seized it and pulled it along, laughing at the ease with which it moved. Then the men knocked them away and played with it themselves. While the women hastened away to find other hollow logs upon which to haul several trips of water from the river at a single time.

But Zalu saw none of this.

The inventor of the Wheel was dead.

THE END

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THE IMPOSSIBLE WEAPON

STANLEY Stokes stood on the balcony and looked up at the sky. He couldn't actually see the sky, since the tiny glowing pinpoints of light that made up the force field hid it quite effectively. He wondered idly how lovers fared without moonglow and starlight to give their passions impetus, but then he thought, to hell with lovers, I've got my own problems.

He turned and finished his fourth

drink—or was it his fifth? Sixth? He said belligerently, "I hate bureaucracy. I particularly hate the Assistant Secretary of Defensive Weapons, Spatial Division."

Lila took his hand and led him back inside, plunking him down on a big overstuffed chair. "You're high," she told him severely. "And the A. S. D. W. S. D. happens to be my father."

"That makes it even worse," Stan-

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by MILTON LESSER

The enemy had a new weapon which seemed unstoppable—. But if one reflected on the matter long enough the perfect defense was deceptively simple. . .

ley proclaimed. "The man who sired my girl friend is a complete and utter nincompoop."

"Father is not a nincompoop!"

"Nor am I a hero, but I happen to be in a position to save the Earth. I can do it, despite the fact that I'm not a hero. So your father should listen, despite the fact that he is a nincompoop."

"He did listen."

"He did not listen. Her merely sat there while I talked, and when I finished he smiled politely. I think he

even winked at one of his aides. It took two months before I could get close enough to see him wink, and then, after ten minutes, he said no."

"The United Nations pays him for his work," Lila said acidly. "They believe he knows his business."

"Is that so? We're losing the war, aren't we?"

"Yes," Lila admitted, "but we weren't, not until last April. What could father do if the Venus-Mars-Ganymede League developed a new weapon? The way you talk, you'd

think he was working for the League or something."

"I didn't say that, but . . . umm-mm. You have a point there."

"Stanley Stokes, you're terrible!"

"That's what your father said, only he used the word *crazy*."

"If you weren't high, I think I'd say goodbye. Permanently."

Stanley rocked back and forth gently, stood up and twirled around slowly until his eyes came to focus on Lila. "I am not high. But it looks like I'm having in-law troubles before we're married, because your father is a nincompoop."

"Stanley, I'm warning you—"

"Remember, I'm not high. Don't let that sway your decision. It's either . . . me or that nincom—"

"Here!" Lila removed the modest engagement ring from her finger, steadied Stanley's hand long enough to place the ring in his palm. "Good-bye."

There were tears in her eyes, but Stanley failed to see them, for his vision had become clouded on its own accord. Gulping audibly, he pocketed the ring, turned on his heel and stalked from the apartment. He tried to stalk in a straight line, his thin shoulders squared, as he had seen Clarke Townsend do so effectively on a score of video shows. But Stanley stalked in a weaving fashion.

Outside, he found an empty jet-cab near the curb. He punched his identification number on the record-box, took the cab up half a thousand feet to the local lane. He idled around purposely for a time, then set the controls in a northerly direction and leaned back. There was a time when he had liked night flying, watching

the dark shadows of clouds scudding across the face of the moon, or on moonless nights watching the star-studded sweep of the Milky Way. But now all he saw was the glowing force field, and after a while he clamped his eyes tightly shut, surrendering the cab to robot control.

Ten minutes later he brought it down on the roof of the Queens County Spaceman's Bar.

Stanley entered the place in time to see the tail-end of a brawl. It must have been a good one, although the cops had not been summoned. Three flunkies carted a mess of broken table and chairs to the waiting maw of a disposal unit; three others helped two battered spacemen to their feet and thence to the street-level door.

But a third spaceman needed no help whatever. His face was a near-catastrophe. Not from this fight alone, but from a score of others. His crooked, nose defied one further fracture; his huge jutting jaw would break knuckles, and not the other way around; his shining dome of a head—Stanley guessed a slight dose of radiation could account for that—was the canvas for lurid tattoos which bordered on the pornographic. But he was smiling, the over-large teeth giving Stanley the strong impression of a horse.

"A couple of puppies!" the ugly spaceman snorted, pounding his two huge hands on the surface of the bar. A frightened barman clambered across a heap of broken crockery and grinned shyly.

"Yes, sir! Oh, yes—a couple of puppies."

"No one asked you! I'll have Venu-sian brandy."

The barman gulped. "I'm sorry, sir. We haven't been able to get Ven-
usian brandy since—"

"I know, dammit! Since they came
up with that new weapon and chased
our fleet out of space, its tail be-
tween its legs. Okay, give me cognac,
a triple."

Stanley gazed upon the proceed-
ings with evident satisfaction. Here
was a man after his own heart, even
if it was a man endowed with about
twice as much brawn. Hardly realiz-
ing it at first, Stanley found himself
walking across the floor and joining
the hulking figure at the bar.

"Name's Stokes," Stanley said in
his best basso. "I agree with you. A
shame that we have to run away
with our tail between our legs just
because they develop a new weapon."

"You think so, huh?" The huge
spaceman seemed much larger from
an eye-level proximity with his
shoulder, and his booming voice
lacked the faintest suggestion of any-
thing but hostility. "I don't. Hell, it
makes me sick, Stokes—but what
can you do about it? You can't ex-
pect the boys to commit suicide by
throwing themselves against a wea-
pon they can't fight. Say, are you
one of them damn pacifists who says
we ought to surrender?"

"No," Stanley said at once, trying
hard not to blanch when the space-
man looked down at him out of fum-
ing eyes. "Quite the contrary. I be-
lieve I have the solution Earth has
been looking for."

"You believe what? Just who the
hell are you?"

"Technician second-class Stanley
Stokes, Quantum Division. If you—"

"A quanto-tech!" The spaceman

snorted. "What the devil can you do?"

"Let me finish and I'll try to tell
you. All my plan needs is a space-
man and a ship, and then I think we
can show the League a thing or two.
Yes, bartender, I'll have cognac too.
All right, a—a triple. Now—"

But Stanley didn't have a chance
to finish.

Someone cried: "Holy Rockets, the
cops!"

And someone else: "Let's get out
of here! If O'Hanrohan decides to
fight—"

O'Hanrohan was the hulking
spaceman with the booming voice,
and it looked like O'Hanrohan would
decide to fight. He stood with his
back to the bar, his feet planted wide
apart. He picked up the bottle of
cognac by its graceful neck, smash-
ing it down against the mahogany
with savage force. A lot of cognac
and a lot of glass sprayed all around
the immediate vicinity, but O'Han-
rohan came up holding a shattered
half-bottle, its jagged edges gleam-
ing under the fluorescent lights.

With his free hand he grabbed
Stanley around the neck and held
him that way. "We're getting out of
here!" he shouted. "Try to stop me
and you'd be making a mistake."
Then he hissed in Stanley's ear: "Did
you leave a cab up on the roof?"

And when Stanley nodded weakly,
his chin scraping against the hairy
forearm: "Good. We'll take it and
scram."

The half dozen cops had an as-
sorted arsenal of blasters, needle-
guns and heat-beams, but they
couldn't use it, not with Stanley ef-
fectively shielding O'Hanrohan from
their fire. O'Hanrohan backed slowly

toward the roof exit, pulling Stanley with him. He didn't release his grip until they stood on the other side of the door. Then he kicked the door shut, bolted it and turned toward the waiting cab. Almost immediately, fists were pounding on the door. A moment later, its surface began to glow a dull cherry-red.

"They're using heat-beams," said O'Hanrohan. "That doesn't give us much time. Are you coming with me?"

"With an escaped criminal? A fugitive? Do you think I'm crazy?"

"I'm a fugitive, but not a criminal. One of those men I hit was an officer, but he had it coming. A lousy pacifist, he wants us to give up! You coming? Don't forget, sonny: I'm your spaceman, and I can get a ship."

Stanley looked at the door, glowing more brightly now. He watched the drops of molten metal dripping off sluggishly to the pavement below. If this wild giant of a spaceman wanted to help him . . .

"I'll go with you," he said, and together they ran for the cab. Behind them, the door dissolved into a bubbling pool and the first policemen stepped over it gingerly. A blaster seared air just below the cab as it flashed off the roof.

Stanley's thoughts were whirling. First Lila and his engagement ring—now this. Of his own free will, he had fled with a fugitive from justice, had helped him, in fact. Well, hardly that, but the police might think so. At least now he could lean back and think it all over. He thought he had the answer to the enemy's new weapon, but he could be wrong. And if he were, he'd gambled everything on a cockeyed theory—

Something made their cab bounce.

Something else made it spin and twist and turn upside down, bouncing Stanley's head momentarily off the ceiling.

"Strap your safety belt!" O'Hanrohan roared.

"What—what's the matter?"

"The cops followed us in their ship. They're firing."

"Even when you have a hostage on board?"

"Yeah. No! They must've heard us talking on the roof. I guess you're in trouble, sonny. Want to shake?"

They did, or they started to, but their cab bounced again, then shot skyward on a tangent. "I've never been shot at before," Stanley said.

O'Hanrohan grunted. "I don't believe you ever rode one of these cabs at three G's, either, but if we want to get away, you'll start doing it right now!" With a grin creasing his battered face, he pulled the jet-stick all the way back.

Something grabbed hold of Stanley's stomach and twisted, jamming him back against his chair at the same time, holding him there, squeezing all the air from his lungs. Spacemen encountered this sort of thing all the time, he knew, out in the bleak cold vault beyond Earth's atmosphere. But he was no spaceman, and a Sunday game of tennis was enough to give him a worn-out feeling.

O'Hanrohan laughed. "Look at that! Only three G's and they can't match it."

Stanley wanted to shout encouragement, but he found that his voice couldn't leave the neighborhood of his throat.

"See?" O'Hanrohan continued. "We've left the local level. We're going up in a tight loop. By the time the cops reach express upstairs, we'll be on our way down again. They'll come down, only we'll be on our way up again. When they figure that one out, we'll be halfway to White Sands."

"White Sands?" Stanley managed.

"Yeah, White Sands, New Mexico. If you know what you're talking about, I think I can get us a spaceship there. Well, hold your ribs, sonny—we're going up agin'!"

Stanley started to hold his ribs, then blacked out, O'Hanrohan's wild laughter ringing in his ears.

"How does she look?" O'Hanrohan wanted to know. He stood with hands on hips, surveying the space cruiser.

"Isn't it a little small?" Stanley asked.

"Small? Of course it's small. Just a one-man cruiser. Did you think I could borrow a battleship or something? No, there's enough room for me to get inside, and if I can make sense out of your plan, I'll take her up."

"How did you get that ship?"

They had arrived in White Sands not more than six hours ago, Stanley realized. He had arrived with a mean headache, either from his drinking or the excitement, or perhaps a combination of both. O'Hanrohan had left him in a deserted little cabin out on the desert, and Stanley had been asleep almost at once. Now—when he awoke—O'Hanrohan stood outside, admiring his spaceship.

"Well," O'Hanrohan parried, "do I have to answer it?"

"We're going to work together as a team. I suggest that you do."

"Sure. Only—well okay! I know a gal who knows a man who guards a gate. The same old story, Stanley. She paid this man a visit, he got kind of busy, I went in and lifted the ship. . ."

"You stole it!"

"Hell, did you think the government would give it to me?"

"I thought you knew someone who would."

"I was thinking of this gal all the time. Anyway, important thing is I got us a ship. Now what?"

"I hardly know where to begin," Stanley admitted. "Also, I might as well tell you I'm afraid. Maybe my idea won't work after all."

O'Hanrohan said nothing, but the look he gave Stanley indicated plainly enough that his idea had better work.

"Let's take a look at the war," Stanley said. "At the beginning we almost lost, because the League started everything with a sneak attack. H-bombs and A-bombs—knocking out half our cities. That was five years ago. We countered, made a mess out of their military establishments. Then what happened?"

"Hell, everybody knows that. Roger Marshall invented his force field."

"Yes, the force field. And do you know precisely what a force field is, Mr. O'Hanrohan?"

"Call me Charlie. Yeah, I know. It's something damn strong, and nothing can get through it."

"Nothing?"

"Well, nothing except this here new weapon the League came up

with. What are you driving at Stanley?"

"The league has a new weapon which the force field can't stop. So far, they've only used it on our ships, and the ship force fields have been like so much paper. They haven't used it on Earth yet, because they realize Earth is a ripe plum and they'd like to get this planet untouched—after we're forced to surrender.

"All right so far? Good—now let's get back to the force field. Take atoms, any atoms, and strip away the electrons and protons, the neutrons—strip away all the subatomic particles. What do you have left?"

"Why . . . nothing!" O'Hanrohan scratched the tattoos atop his shining dome.

"You're wrong. What's left are the interatomic forces, the forces which bind subatomic particles together. Only they don't have to do that job any more; there are no subatomic particles. Those interatomic forces become a force field! It can withstand anything, even direct H-bomb explosions. Anything, that is, except for the new League weapon. Our scientists call it an impossible weapon, for it behaves the way no weapon should. It goes right through a force field the way a knife goes through melting butter."

O'Hanrohan shook his head. "I know all that. Every time we send a ship into space, they knock it right out, and all the force fields in the universe don't matter. So we're helpless. What I want to know is this: what the hell can you do?"

Stanley smiled. "I think I know what that weapon is. And, if I'm

right, I know what can nullify it, only the government won't listen."

"They're a little slow on the uptake, eh?"

"Uh . . . yes, a little slow on the uptake. I'm a quantum technician, as I told you. I work with light. Do you know what light is, Charlie?"

"Of course I know! Why, light is . . . umm-mm, light!"

"No one knows for sure. It reveals things to our physical senses, it travels at a speed of 186,000 miles per second in vacuum, somewhat lower in air or water, but not much. That's light, and that's all we know. We're not even sure whether it consists of waves, or particles, or a combination of both. I was fooling around with light, Charlie. That's my job, finding new and better ways to keep the lamps of Earth burning.

"Puttering around, I discovered a method to slow light. To slow it tremendously—all the way down to 10,000 miles per second. It still looks like light, I found—but it doesn't act like light at all. It acts more like a disintegrator. It destroys things, and a force field doesn't stop it! That's the League's new weapon, Charlie—slow light!"

O'Hanrohan looked amazed. "Yeah! Yeah! That's what everyone says. It looks just like a beam of light. So what will you do, speed it up again?"

"Don't know how. Instead, I'll simply use one of light's well-known properties. Come on, we're wasting time. We have to do a lot to this ship of ours."

Not only was O'Hanrohan a good spaceman, he also was a good mechanic—and something of a shop-

lifter. He got the supplies Stanley needed, and Stanley no longer bothered to ask him how. And then he set them up following Stanley's instructions. For his own part, Stanley found a book on astrogation and proceeded to study it. He found the subject intensely interesting, and he had time to kill while O'Hanrohan remodeled the ship under his tutelage.

A day came when Stanley felt sure that, if ever the occasion demanded it, he could pilot a spaceship adequately. But then he snorted at his fanciful thoughts. As if such a day would ever come!

He felt restless, nervous—and at first he thought the necessary delay for converting the ship could be blamed. But, as the final hours came, he still felt that way. He got increasingly morose.

Wandering about their little cabin, he found a bottle of O'Hanrohan's cognac, and he proceeded to drink it in a way which would have done the big spaceman proud. On his third drink, he began to think of Lila. On his fourth, he realized he still loved her. He determined to do something about it.

O'Hanrohan was out getting the final material, and Stanley entered the spaceship, sat down at its radio, twiddled the dials idly. He'd acted like an idiot. Why hold Lila responsible for her father's behavior? Too many friendships had been ruined that way, let alone romances. . .

When the bottle was empty, he called Lila's home in New York. He got a lot of static at first, but presently Lila's voice followed it into his ears.

"Hello?" Faintly, listlessly.

"Hello. This is Stanley."

"Stanley?"

"Stanley."

"Stanley! Where are you? Where have you been? They gave a description of a man who helped a berserk spaceman escape New York, and—"

"He wasn't berserk."

"He was, according to the reports. Where are you?"

"Lila, I—I was wrong. I shouldn't have argued like that. I still—love—you—"

"Stanley! I love you too. Let's just forget it and start all over. Stanley?"

"What?"

"You don't sound so good, Stanley. Are you ill?"

"No, I've been drinking."

"Don't argue with me, you sound ill. Poor Stanley. Is there anything I can do to help?"

"No. But I'm all ready to try my plan, and I can give you back your ring—after I return, a hero."

"You are ill! Father told me all about this crazy plan of yours. I want to help you, Stanley, don't you see? I know, I can have Father trace this call, and we can come for you—"

"Don't!"

"Father! Father!" He heard her voice calling, muted, as though she had turned away from the radio. The call had been a mistake. He broke the connection, turned away from the radio. O'Hanrohan stood there, regarding him severely.

"I heard that, Stanley. She's going to trace the call. We'll be found before we can try your plan. Of all the dumb—"

Stanley stood up very straight.

"No. I admit it, it was a mistake. But it merely means we'll have to work faster. You'll be taking the ship up in a few hours, Charlie, before they can get here."

O'Hanrohan swore under his breath, and they set to work with the final material.

First, however, Stanley brewed a pot of strong coffee. He drank it black and scalding and it made him feel better.

Hours later, O'Hanrohan stepped back away from the ship. "It looks nuts." He scratched his bald head. "But I guess it's finished."

"Not quite," Stanley told him. "We still have to take out the force field."

"What? I can't go up there without a field. It'd be slaughter."

Stanley removed the tiny power plant, dismantling it carefully and storing the parts in their cabin. "The force field won't do any good against the League's new weapon, anyway. And they'll never get a chance to shoot at you with their more conventional weapons. You'll merely steer the ship into their beam, then desert it in a spacesuit."

O'Hanrohan cursed softly. "It not only looks nuts, it sounds nuts! Stanley, I don't know why—hey!"

Stanley heard it too. High overhead, a droning. Coming closer every moment. They ran outside the cabin together and looked up into the twilight sky. Two dots.

"Maybe they're going away," Stanley suggested hopefully.

"Don't bet on it, sonny. See, they're circling. And coming down!"

They were, slowly at first—then faster. Soon Stanley could see them

quite clearly against the darkening sky, two police fliers.

"They won't fire," O'Hanrohan guessed. "They'll want to get this ship back in one piece. But after they come down they'll use hand guns. If we're not public enemies number one and two, we're damned close, Stanley. You never should've made that radio call!"

"I know it, but that won't help now."

"Listen! I'm going to take that ship up. Five minutes is all I'll need to get her warmed, and you'll have to hold them off till then."

"How?"

"Here, with my blaster."

"I—I can't fire one of those things. I might kill someone!"

"More likely, you might miss. If you could return their fire and pin them down without hitting anyone . . ."

The planes came closer, their jets quiet as they prepared for landing. Stanley said, "Don't you see? I couldn't do that, but you could! You could pin them down, Charlie."

"Yeah? How would I take the ship up at the same time?"

"You wouldn't. I would."

"You! Very funny."

"I'm not kidding. It's the only way, because if they take us now, we'll never have another chance. I know how to pilot that ship. I think I know how. I read a book—"

"Oh no! Not a book. Tell me anything but that. You read a book!"

"I can do it," Stanley insisted. "We're wasting time. You hold them off till I get up—then surrender, Promise?"

"Yeah, sure. I don't want to kill

no one. Hey, wait. Who said anything about letting you—"

But Stanley didn't hear him. Stanley was running toward the ship, darting and weaving clumsily, for already he imagined that blasters were searing the air behind him, crisping the ground under his flying feet.

Soon he heard a voice behind him, a very commanding voice which cried: "You! Stop—stop or we'll shoot!"

This time it wasn't his imagination. Blasters roared, little puffs of dirt kicked up at his feet. His breath came in sobs, his legs felt numb—and then, somehow, he was within the ship. He slammed the port shut, bolted it, looked for a moment through one of the view domes.

O'Hanrohan was down behind an outcropping of rock, old Wild West fashion, returning blast for blast, keeping the police busy. Good old O'Hanrohan!

Stanley kicked the cyc-lever over, heard the atomic engine miss once and then catch on with a loud, steady droning. Dimly, he heard the blasters roaring outside, watched the needle climb slowly from warm to ready to—fire!

He thumbed down the rocket-buttons, forgetting to strap himself in. The ship lurched crazily, then left the ground behind it, tugging Stanley's insides and making him scream. The ride in the jet-cab had been a three-G lark. Now he watched the dial climbing: four G's, four and a half, five. His vision blurred, his ears rang, his stomach was impossibly constricted.

Six G's. . .

Incredibly, it was over. The ship floated serenely in deep space, acceleration concluded. The fact that inertia carried it forward at fifty miles per second did not matter; Stanley felt nothing.

O'Hanrohan had done some checking. There should be a convoy of freighters out of Auckland base, heading for the asteroids. Fine. The League probably would be waiting for it. But, quite suddenly, Stanley felt afraid. He glanced at the planet meter, saw that he was seventy thousand miles up. Behind him in the rear-view dome he could see Earth, a great gray-green globe, the pinpoint lights of the force field glowing like an infinity of fire-flies. He was in space! In space. He had never been beyond man-made Satellite One before, a mere eight hundred miles up. But seventy thousand!

He busied himself with the radio-receiver, scrambling the dials the way O'Hanrohan had demonstrated.

He listened: "*Silver Star to Ceres King. To Ceres King, over.*"

"*Ceres King,*" came another voice. "We haven't spotted anything yet, Mike. But Lord knows the Chief expects it. The league can pop us out of the sky like clay pigeons, any time it wants. I—Mike!"

The other voice again: "Yeah, I see it too. We ought to turn around and run, but we've got to get supplies through—"

Stanley picked up the little pips that were the convoy ships on his radar grid, followed them. He could see them through the foredome now, a score of freighters with a small military escort vessel flying each flank. And just ahead of them, not

more than a thousand miles—a tiny mote of a League ship, and The Weapon. . .

It fanned out across the vault of space, probing. A wide beam of radiance, emanating from the League ship, spreading out across the heavens like a wide cone of light. Light—and yet not light. For at its speed of 186,000 miles per second, light seemed instantaneous. But Stanley could watch this beam groping, probing, leaping out across space. Light, slowed to a fraction of its ordinary speed, and behaving impossibly. . .

Stanley called into his radio: "Ships of the convoy! Convoy, do you hear me?"

A voice, perhaps one of the two he had heard before: "We hear you. What do you want?"

"Keep away from the beam! I think I can stop it."

"Who are you?"

"I—never mind. I can stop it, I said. Just give me five minutes."

He waited, heard nothing. Outside, the ships began to wheel around. But only some of them. Half a dozen either hadn't heard or refused to believe him. Six ships rocketed on toward the beam, trying to avoid it by speed.

The beam swung around, licked out—caught them! They flashed brilliantly for a brief instant, man-made novae. And then they were gone, completely disintegrated. The remaining ships broke their formation, hovered about in chaotic array. The beam swung toward them, knifed through, picked the ships out one by one and destroyed them.

Stanley had never witnessed such

carnage before. And now, with a first-hand view of the League's Weapon, he began to doubt his own theory. What if he were wrong? What if—

That was ridiculous! He'd staked everything on his theory. It had to work! If it didn't, the entire convoy would be destroyed. And Stanley, floating slowly in space in his spacesuit, could be picked off at leisure. Eventually, the entire Earth . . .

He set the robot controls carefully. His ship would hit the beam of radiance broadside, would plow directly into the brightest part. Stiffly, he rose from the pilot chair, climbed into the unfamiliar bulk of a spacesuit. Without realizing it, he'd swept dangerously close to the beam. He was vaguely aware of two more convoy ships puffing away into nothingness—and then the beam swung toward his own little craft!

He fastened the spacesuit on the run, got into the airlock, then activated his shoulder jets, spinning away from the ship, end over end, because he didn't know how to operate them.

After a time he righted himself, saw his ship a few miles off in space, entering the beam.

He waited breathlessly, hardly daring to blink his eyes for fear he might miss something. The ship disappeared within the beam, then swam into vision again, distorted, puffing—

It exploded!

Wildly, he looked again. He had failed—

No! Something flared brilliantly at the far end of the beam, and in an instant the radiance blinked out. Stanley sighed happily. This was the

answer to the League, and it was so ridiculously simple. Sometimes you can nullify a super weapon with a good application of horse-sense . . .

O'Hanrohan grinned. "Sure, sonny. I held them off, but they were plenty sore afterwards. If the report hadn't come in on what you done—"

"The important thing is that it did come in, my boy," Lila's portly father beamed happily. And Lila squeezed Stanley's hand, flashing her reinstated engagement ring.

Her father said, "You'll have to make a full report to the United Nations, naturally. Want to give me some inside dope beforehand? Just how did that contraption work?"

"Well," Stanley said, "as I explained before, the League's new weapon was light. Just light. The force field couldn't hold it back."

"But how can light destroy—"

"It can. When you slow light down to 10,000 miles per second, it isn't really light any more. It looks like

light, but it seems to be concentrated at that slow speed, and it has a new property. It disintegrates."

"That much I know," Lila's father agreed. "But how did you stop it?"

"How would you stop any light? How would you turn light back to where it came from? Or, in this case, how would you make a dangerous weapon do an about-face and destroy the ship that produced it? Simple. O'Hanrohan and I coated the outside of my ship with silver paint, put a layer of plain ordinary glass over that. See, the force field has no reflective qualities whatever: it absorbs light, as a matter of fact.

"O'Hanrohan and I fixed that up. When the light hit our ship it bounced back and knocked hell out of the ship that beamed it. You can take care of the League's super-weapon any time you want, now. It isn't much good as a weapon when all you need to stop it is a good-sized mirror!"

The End

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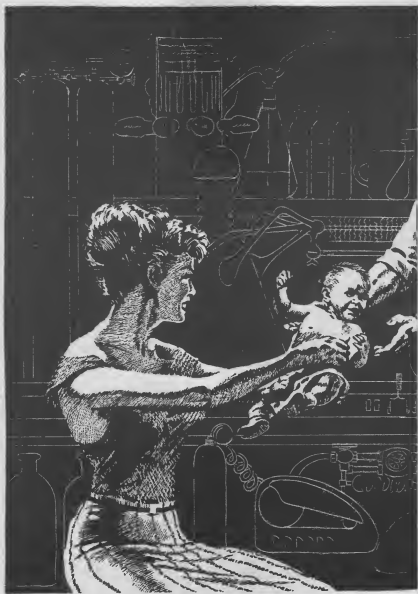
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THIS IS MY SON

By PAUL W. FAIRMAN

A set of odd circumstances prevented John Temple from seeing his long-awaited son during the first six years of its life. But the time finally arrived when he was free to display the natural affection of a father for his boy—only to learn that naturalness had nothing at all to do with it!

TEMPLE had his neck saved several times by the counsel of the older and wiser Mike Murchison. Temple would have a couple of drinks after hours—just enough to sharpen the yearning—and then Murchison would find him in his room throwing socks and shirts into a bag, getting ready for the next copter out.

The dialogue usually went something like this: Temple would turn with a snarl and

say, "Now before you start—I'm telling you—keep your long nose out of my business!"

Murchison would sit down and light his pipe and answer, "Why I wouldn't tell you what to do—not for the world."

"Then don't start. I want to see that boy of mine and nothing's going to stop me."

"Not even the fact that your contract's voided if you jump your job and run back to the States?"

"Damn my contract! A man can take just so much. I've got a son five years old and I've never seen him."

"Oh, yes you have. You've had him right here in this room more than once—on video."

"Sure—on video! A picture on a screen!"

"And that's a mighty pretty wife I saw when you called them last time."

"You're damned right. And that's why I'm heading home!"

Murchison would suck at his pipe. "Of course, it won't be so bad—as long as you're not depending on that severance pay to bring him up and send him through college—to make him a physicist like yourself."

"The hell with college!

We'll go fishing. That'll be more fun."

"Yeah," Murchison would say, "you won't be able to get another contract—not from anybody—when the word gets out that you broke this one."

At this point, Temple would usually wad a shirt up and throw it viciously into his bag. "Why do they have to make it so damned tough on a man? Would the world collapse if I took a week off to see my family?"

"Well, no, not exactly. But the particular work you're doing would have to stop. It's your specialty, you know."

Then Temple would pick the whole bag up and throw it across the room and Murchison would know everything was going to be all right for a while and say, "It won't be much longer, son. I know how these South American jungles are on a man—especially one with a family waiting for him. But just think what you'll have when your contract's up and this blasted solar heat depot is finished. A citation for your loyal services; a two-year vacation; all the money you need. It's worth waiting for, man. You're doing your wife and son credit by sticking it out."

After that, they would have a couple more drinks and

Temple would take a pill and go to sleep. Usually, to dream about John Temple Jr.

He had met Jill in 2034, his last year in M. I. T. But he had insisted upon waiting a year to be married because it would not be until a year after that before they could afford the children he wanted.

Jill had found humor in his resolution. She said, "But darling, we can get married now and wait a year to have children. Don't you want me as soon as you can get me?"

"Of course I do, angel, but a marriage without children is just—well, no marriage at all. You understand that, don't you?"

As a matter of fact, Jill didn't understand it at all. Such a philosophy seemed strange to her in this push-button age. Twenty years earlier, perhaps yes, but planned parenthood was an accomplished fact now. With the wonderful new discoveries—with the new knowledge of genes and basic fibers, and elemental magnetic cohesions, even the sex of a child could be arranged.

But Jill was in love with her man. So much so that just about anything he said was all right with her. So they waited and were married the

week after John signed his first contract.

It was a contract for work on a local job, in New Mexico, and living quarters accommodated wives and children, so they went down there to start their family.

They didn't have time for much else, because John's work was so exacting and the hours so long. Nor was it an easy life, but John always had that great day to look forward to—the day the doctor told Jill the wonderful news.

But the day was rather stubborn in coming. As month after month went by and Jill had no word for him, John began to worry. Could something be wrong with him—or with Jill?

Old Doc Adams checked and assured them that this was not the case. They were both disgustingly healthy and well able to have children. Then why hadn't it happened? The doctor could only shrug and say that those things took time. Or at least, in certain cases they took time, and it began to look as though this was one of the cases.

All Doc Adams could say was to keep trying. He said this cheerfully enough and seemed full of confidence, but as time continued to pass,

even his confidence got slightly shopworn.

Jill was miserable. She wanted more than anything in life to give John a son because she knew that was what he wanted more than anything in life. Yet nothing happened.

Then came the day John got his South American offer. It was a fabulous one: a contract any young physicist would have given ten years of sweat and effort to procure and it came to John two years after he graduated from M. I. T.

There were conditions attached — conditions John would not have even considered if things had been different; but as he said to Jill: "Looking at it one way, a six-year contract isn't so bad, even with the seclusion clause."

She could not understand at first. "I think it's abominable! Forcing a man to remain separated from his wife for six years!"

"They aren't being arbitrary. It's necessary, really. You see each scientist is assigned a separate project with a time schedule, each project interlocking at the end of six years. The cost is enormous and every man has to keep

his end going or there's hell to pay."

"What if somebody dies? Do they prop him up in his laboratory and force him to keep working?"

"Each man has to pass the most rigorous physical examination imaginable. Then he is insured for five million dollars; the aggregate in premiums is staggering, but they figure it's worth it."

"Maybe you can't pass the physical, dear."

"I've already passed it." After the slight pause while Jill looked at him in blank surprise, he said, "Can you beat it? I can pass the toughest examination they can dish out, and yet—" He spoke bitterly.

Jill put her arms around him. "Darling. I know what you're thinking, and it isn't your fault! I'm the one that's all wrong. It's got to be me!"

He shrugged. "I guess 'it doesn't matter which of us is off the beam.'"

Jill was almost in tears. "If it were only fifty years ago. Just a measly fifty years!"

"How would that help?"

"In those days there were more babies than they knew what to do with. There was such a thing as adoption."

John shook his head. "It

wouldn't be the same. Not our own son. Somebody else's kid."

"But—"

John got up and took a quick turn around the room. "As long as things are—well, the way they are, there's no reason why I shouldn't go to South America and set us up for life. There aren't many jobs around where a man can make enough to retire on a single contract."

Jill understood then, and wondered how she could have been so dense. John was willing to leave her for six years. If she was able to give him a son, it would be different. Then wild horses couldn't have dragged him away. But so long as he would be leaving only a wife—

After her heart broke a little, she stiffened her chin and said, "I think you're right, darling. You would be very foolish to pass up such a good opportunity . . ."

John had been in South America only four months when the wire came. *Our son due in five months. Congratulations. Love. Jill.*

First there was the shock of it. Then the elation. After that, John began thinking sanely enough to wonder about the manner in which Jill had sent the message. By

wire! Of all the antiquated methods of communications! She could have telephoned. She could have videoed down and told him personally on a private band. But to send a wire. Why hadn't she just stuffed the message in a bottle and trusted the ocean currents?

He videoed home immediately, but Jill was out and he was greeted by Sarah, the maid they'd hired before he'd left the States. Sarah was pretty cold and formal about the whole thing. She didn't know when Jill would be home; didn't know where she could be reached; didn't seem to care.

John flared like a hot crater and reminded Sarah that she was expendable. Sarah sniffed and suggested he start expending. Any man who regarded his wife only as a breeding machine—

The light dawned and John realized what a selfish heel he'd been. That was the first strenuous effort Murchison had to make to keep him on the job. Murchison succeeded, but only after personally contacting Jill and begging her to give John a chance to square himself.

John talked to her on a private video band and did such a good job he had her

crying in five minutes. In ten minutes he was crying himself and five minutes later all the bad years had been washed away.

There was a little trouble at the birth, it seemed. John wasn't informed until forty-eight hours afterward, when his son was in an incubator and Jill was beamed down to him from her bed at home.

That was the second time he almost flew the coop and got himself blacklisted from pole to pole. Again it was Murchison who saved him.

The first time he was allowed to see his son, lying snug in Jill's arms, he got so hooting drunk, Murchison spent all the following night checking his work for error, and John spent the next night thanking him. After all, he needed his job now. There was his son to be considered.

Finally, after ten thousand years by Temple's calculation, his contract expired. He was a free man with Murchison clapping him on the back and saying, "Well now, old man. Wasn't it well worth the waiting?"

It had been. He thanked Murchison for all he'd done, and then there was nothing to do but curse the pilot for being so slow; for not ram-

ming the old passenger jet right out of her skin.

And home.

He hadn't told Jill of his exact arrival time, wanting it to be a surprise. But the surprise was his as he walked through the front gate of the place Jill had bought three years before and saw the child playing in the yard.

Temple stopped and stared. John Temple, Jr. The video shots hadn't done him justice. A beautiful, curly-haired, great-eyed child who seemed to give off an aura of pure perfection.

Temple advanced toward him almost on tiptoe, as though moving toward a shrine. When he drew close, the boy looked up suddenly, but he had the composure of one far older. He smiled quietly and held up his arms and said, "Welcome home, Father."

Then Temple was holding him and Jill was running from the house. "John! Darling! Why didn't you let us know? We'd have met you!"

He freed one arm and caught her in it, grinning like a half-wit. "I wanted it this way, angel. A working man coming home to his little family."

"We're delighted, Father,"

John, Jr. said quietly. He spoke with complete sincerity, however, and Temple drew him even closer.

Temple said, "Listen here, young fellow. Don't you think *Father* is a little formal? How about *Dad*?"

John, Jr. glanced at his mother as though happily asking permission. She nodded slightly and only now, did Temple catch that little worried look in her eyes; the look that was to puzzle him through the months, but for which there was apparently no explanation.

A heavenly week later, after Jill had said—for possibly the hundredth time—"Darling, I'm so glad you love him—that you're—satisfied with him," Temple frowned slightly and spoke what had been in his mind on the former occasions.

"Look, Jill, I—well, I suppose it's just my imagination, but is something bothering you?"

He was sure she colored slightly. "Why, darling! What a question! What could possibly be bothering me?"

"I can't think of anything. That's why I want you to tell me. I know it's been a long time. We practically have to get acquainted all over again."

"There's nothing, John—nothing. I'm—I'm wonderfully happy."

"But you're on edge—I feel a tension in you."

"But that's absurd."

"I suppose so, but at least a hundred times, you've told me how glad you are I'm satisfied with him—that I love him. Good Lord! What reason would I have not to? Doesn't it follow that a father is satisfied with his own son—especially a son like Junior?"

"Of course—of course. I guess it's just been so long that—"

She had no time to finish because John, Jr. came to where they were sitting in the backyard and Temple's thoughts and words were all for him.

The blow came suddenly, without warning, as terrible things usually do. Temple was in the bank one morning, transacting some business, when he looked up and saw Doc Adams standing at the counter beside him. Temple pushed out his hand and said, "Doc—Doc Adams! Good Lord! I thought you'd retired and gone on a farm up in the northwest years ago!"

The old medic peered through his glasses a moment. "John Temple! Of all people.

Thought you were in South America."

"I was, but my contract ran out."

"Well, it's certainly a pleasure seeing you. I just dropped back to town for a few days to clear up some details on a property sale. That old house of mine. So you're back in the States again."

"You bet. Had to rush back and see that son of mine!"

Doc Adams looked blank. "A son? No! Well, congratulations. It happened at last, eh?"

It was Temple's turn to look blank. "What are you talking about? You act as though you're surprised."

"I am. I'd about given up hope for you two. So you have a baby!"

"Not a baby, Doc," Temple said quietly. "A boy going on six years old."

Doc Adams frowned. "You are joking!"

"Going on six," Temple repeated, "and I'm not joking."

"But—but I only retired three years ago." Suddenly he looked hurt. "Did Jill go to another—"

Temple had placed a hand on the old man's arm. The fingers gripped tightly. "Doc, did you or did you not deliver Jill of a child above five years ago?"

"I wish I could say yes. Nothing would have delighted me more. But—"

He stopped talking. There was no one to talk to. Temple had rushed from the bank.

Temple walked all the way home, forgetting his car parked at the curb. What on earth was the meaning of this? Why had Jill gone to a new doctor? Or, more important, why had not she told him she was doing so? There was a reason, perhaps. There had to be a reason . . .

Jill and John, Jr. were in the park when Temple got home and the house was empty and quiet. Temple paced the floor of the living room for a while, then went upstairs, taking them two at a time, and began rummaging through the dresser drawers. He found nothing, but he kept on going—to some old boxes in the closet on a high shelf; then to the attic and into some old trunks. He did not know what he was looking for, but while he dug through old papers and what not, he sincerely hoped he would not find it.

This hope was dashed. He did find it . . .

When Jill got home, Temple was standing in front of the picture window in the living

room, his back to the pane, his face in the partial shadow. Jill said, "Oh—darling. You startled me. We didn't expect you home. Your business didn't take long?"

"Not very long."

"We had a nice walk in the park. How would you like some sandwiches, you two?"

"None for me," Temple said.

It was the tone that arrested her rather than the words. She looked closer at him and said, "Is something wrong, dear?"

"I met Doctor Adams today."

Jill's eyes widened. Her face whitened. "Doc—Doctor Adams! Why, I thought he went to—"

"Went away? Yes, he did. That was a part of your plan—your deception, wasn't it, Jill?"

She hesitated as John, Jr. looked at them, puzzled. He asked, "What's wrong, Dad?"

For the first time since his return to the States, Temple looked at his son coldly. "Be quiet." He turned to Jill. "I came home expecting to ask why you'd changed doctors without telling me. That would no doubt have given you a chance to think up a quick lie. But that won't be necessary. While I was wait-

ing for you, I went upstairs and hunted around and found this."

He held forth a folded sheet of paper. Jill took it with a numb hand. She knew what was written on it, but she read it anyhow:

WELLMAN BIOLOGICAL
LABORATORY AND CLINIC
Debit to:

Mrs. John Temple
One android — formed
and incubated for three-
month period. (Male.)
\$678.50.

John, Jr. was peering at the bill from where he stood. He asked, "What is it, Mom?"

Temple answered the boy savagely. "It's something that proves you aren't my son! That you aren't even a human being! That you're a monster!"

Jill's face went dead white. For a moment, her eyes were terrible. Then she stepped close to Temple and slapped him across the mouth. She stood for a moment, striving to speak, then said, "I guess neither of us had better say any more until we can think sanely." With that, she took John, Jr. by the hand and went upstairs.

Temple dropped to the lounge and sat staring at the

floor. The room seemed to go around and around. Finally, it steadied down, but his mind was still a chaos. But his brain was too numb from the horror to think clearly. He sat and stared . . .

He looked up and saw Jill standing in front of him. She had her hat and coat on and she set a hurriedly-packed bag on the floor. She said, "I'll try to explain it as best I can, then John and I will leave."

"Explain—?" he said dully.

"I loved you so very, very much. I felt terribly guilty at not being able to give you a son. Then a doctor—not Doc Adams—told me of this place—about this scientist who had actually created human life—"

"The bill states, *android*," Temple said.

"A term that must be used. Some kind of a legal point. But John is as human as I am—as human as you are. I've watched him—loved him. He's as much my son as though I'd born him from my own flesh. He was as much your son, too, until you read that miserable piece of paper. Does it make so much difference? Hasn't he proven himself? Can you honestly say—?" She saw Temple's face and had her answer and

gave it up. "I'm sorry I slapped you, John. For a moment I was not myself. It seemed such a cruel, brutal thing you did—"

"Does he know—what he is?"

"No—but now I'll have to tell him. He's too intelligent to pass this off without knowing why—without getting the truth."

There was a pause, an empty moment neither of them could fill. Then Jill said, "We'll leave now. I think it's best."

He said nothing.

She moved toward the door, stopped and turned halfway out, said, "I'm sorry, John—and glad. Sorry for you—and for what I've apparently done to you. Glad for myself, because I have a son, whether you have or not."

After a while, he realized he was alone. He sat for a long time and then went to the kitchen and got a full bottle of bourbon and a glass. Two hours later the bottle was empty and Temple was stretched out in a drunken sleep.

He got himself reasonably straightened out after a week of drinking and raised his eyes to survey his bleak new world. There didn't seem to

be much in it. All the foundations knocked from under him in one brief hour. He discovered, through the bank, where Jill had gone, and arranged that she be given all the money she needed. Then he began filling in his time. He thought of going back to work, getting another contract, but kept putting it off until tomorrow. He drifted into a fast crowd and played the races quite a little and—probably because he did not care much one way or the other—won quite a lot of money. He played golf and met beautiful and willing girls, but they lacked something. He became an expert bridge player and spent long hours over the tables with other addicts. Yet they always sensed that he was not an addict and could have gotten up and walked away any time he fancied, even though he played as intensely as they.

A month after the separation, he got a letter from Jill saying that whenever he wanted a divorce to go right ahead. She would sign any necessary papers and not stand in his way. He thought that divorce was probably the logical step, but never quite got around to it. He kept the letter—the only one she ever sent—and reread it on an

average of once a month. At times, he vaguely wondered what the boy was doing—what Jill was doing.

Three years passed; three aimless, drifting years for Temple; years empty of emotion. The letter was pretty badly creased by now. Each time he had to take it from his wallet very carefully.

There was a yearning in his heart, but a rather nameless one because he refused to give it definition. If he thought even vaguely of getting in touch with Jill, he stifled the thought immediately.

At Christmas time of the third year he was walking down a snowy street when he turned suddenly into a store and walked through the aisles until he stopped and pointed to a very fine set of chessmen. "Those," he said to the clerk. "I'd like them wrapped as a gift. I'll write a card."

Shortly after the new year, he received a thank you note:

Dear Sir:

I appreciate very much, your thoughtfulness in sending me the beautiful set of chessmen. Mother and I played several games with them during Christmas vaca-

tion. I am taking them back to school with me and know I will enjoy them through the year. I am attending Carol Hill School for Boys and like it very much. Thanks again.

Sincerely,
John Temple

Temple's eyes softened, but only a trifle, as he read the note. Let's see—he'd be going on nine now—or was it ten. The years flew so fast. Temple put the note away and hurried off to a poker session . . .

Six weeks later, he got home from a casually pleasant evening with a lacquered blonde and snapped on the radio for the late news as he crawled into bed. The report was already in progress:

"—and the Carol School fire was marked by the heroism of one boy in particular, a lad named John Temple. Not only did he keep order in his wing and avert certain panic, but he rescued two classmates after the stairway had fallen, although he was badly burned in the process. He is at Mount Hope Hospital in a critical condition—"

Temple did not stop to think. He reacted. He was out of the house and rolling his

car out of the garage in less than five minutes . . .

Jill sat in the small room into which they ushered him. She was very pale and looked much older, but was still very pretty. There were no formalities, no greetings, nothing to mark the years since they had seen one another. Temple walked over and stood in front of her and she said, "He was badly burned. They think he will die." She spoke through a cloud of dulling shock.

"He can't die," Temple said. "Are we allowed to see him?"

"They are changing his bed sheet—"

At that moment a nurse look in and nodded and Jill got up and followed her out of the waiting room and into a room across the hall. Temple followed his wife.

The boy lay naked on a bed, his body covered with some sort of transparent ointment. Temple saw the horrible burns and shuddered. He walked to the bed.

John, Jr. was awake, his eyes solemn and weary. He could or could not have been in pain. His face gave no indication.

Temple strove for words to express the pitching emotions

within himself. "It—it was a heroic thing you did—and I know——"

The boy smiled. "Perhaps, but if it was a matter of who had to die, sir, it is better that—the human ones—go on living."

In one brief instant, Temple castigated himself to such a depth that he would feel the agony for a long time. "Son—son——"

He thought he saw a sudden brightness in the eyes, but at that moment a nurse entered, carrying a bottle of blood plasma and Temple suddenly turned on her and pushed her from the room. In the hallway, while she looked at him in mild fright, he said, "The doctor! Where is he? I must see the doctor! I must see him now!"

The doctor was not far away and came quickly, and Temple told him what he wanted. Temple said, "It's important, Doctor—you've no idea just how extremely important!"

The doctor considered. "An antique method, but I suppose

we can manage it. You'll have to have a blood-type test first, of course."

A few minutes later a cot was wheeled into the room. Temple followed it, stripping off his coat and shirt. He climbed on the cot and smiled across at John, Jr. He held out his arm and they punctured it as the first step in an old-fashioned blood transfusion.

As the blood began to flow, he said, "Chin up, son. Everything is going to be all right."

The boy smiled. "I—I think I'm going to come through this—Dad."

"You're damned right you are. A little thing like a fire can't stop my boy!" He looked up at Jill and reached out for her hand. It was there waiting. "No sir! Can't stop *our* boy. Why, the three of us together are practically unbeatable!"

Then he looked and saw that John, Jr.'s eyes were closed. He was smiling in quiet, relaxed sleep.

Very gently, Temple pulled Jill down and kissed her.

THE END

SCIENCE OF MAN

by LEON E. STOVER



KILLER APES—NOT GUILTY!

IN the now famous debate of 1860 at Oxford University, Darwin's stand-in, Professor Thomas Huxley, won the point against the church that man was descended from the apes. The church lost in the person of Soapy Sam, a Bishop by name of Wilberforce who closed his arguments by washing his hands with invisible soap. He thus turned to the Professor, before the British Association of Science, and asked Huxley if he was related by his grandfather's or his grandmother's side to an ape. With some very great self-restraint, Huxley entered upon a crushing rejoinder which concluded with an equally personal allusion. He explained that if he had to choose between a *man*, like Wilberforce, who abused human intelligence, or a miserable ape, he would take the latter. Popular enjoyment of the barb made the rounds in reports that Huxley said he'd rather be an ape than a bishop.

Huxley, Darwin and the apes won

the day. The wife of one of the assembled churchmen at the debate, when she heard the news, rendered up the immortal plea: "My dear, let us hope that it is not true, but if it is, let us pray that it will not become generally known."

By now, the fact of man's animal ancestry is no longer a secret. It *has* become generally known.

Or rather, the shape and physical appearance of our evolutionary grandfather is known. But what about his *behavior*? How did he act?

Here are grounds for fresh debate.

We are children of Cain, says Robert Ardrey, descendants of the apemen. War, murder, juvenile delinquency, muggings and assaults in city streets—these are the acts of man's true animal nature. Man is a wild beast who enjoys the blood and loot of the murderous predator. Man is an aggressive killer, hating his prey and loving to kill it. And why? The ape-men before us were predatory hunters, killing antelope and

baboons for food and each other out of an unstoppable habit of rapacious blood lust.

It is all very well to accept apes for ancestors if they behave like decent apes, like the placid gorilla of equatorial Africa. The gorilla is a vegetarian Zen beast—meditative, one is tempted to say. He lies there on his back, hands folded behind his head, one leg propped up on a raised knee, munching fresh bark and looking up into the jungle canopy with his soft brown eyes. The very posture of civilized man at rest, lounging under a beach umbrella.

Ardrey, a playwright turned amateur anthropologist, would have us believe that man's animal ancestors acted more like King Kong than any real-life gorilla; that the ape-men were destructive killer apes. He presents this violent and bloody picture of human origins in *AFRICAN GENESIS* (1961), which recently has had wide circulation in paperback.

That the author is a dramatist by profession should not be laid against him; for it is all too necessary that people who know how to write well should interpret the technical works of anthropologists for the education of the lay public.

Ardrey writes well and he has reached a wide audience. But he has exploited the science of man for a personal vision of homicidal mania. His aim, quite literally, is to raise Cain.

In his high enthusiasm to indite the ape-men for prehistoric murder, Ardrey is a single-minded prosecuting attorney, pushing his case against the accused solely on the

grounds of circumstantial evidence. The defense, to overthrow such trumped up charges, has only to exhibit the accused:—A slight, ninety-pound primate, a midget among mammals. A small-brained animal, moronic as a chimpanzee. Not a carnivorous tracker and slaughterer of game, but a mere scavenger and eater of carrion.

If one could choose between killer apes and spoilers of rotten flesh, which would be the less unappetizing? But of course, one must choose the truth so far as it is known. The food habits of our evolutionary grandfather may disgust us, but the ape-men, at least, were not violent creatures. Man came by his talent for murder quite on his own as an emerging human being, without any help from some vague primordial stirrings of the inner beast.

The ape-men are proof of Darwin's theory that men and apes evolved from a common source in Africa. The proof consisted in the bones of *Australopithecus*, discovered in Lower Pleistocene deposits in 1924.

Australopithecus is an early genus of family *Hominidae*, the zoological family to which modern man belongs. But the australopithecines or ape-men were not human. They belong far down the evolutionary line, toward their community of origin with the apes. They had not yet made the revolutionary change from animal to man. Ardrey's basic mistake is to read human performance into them. For murder and hunting are types of behavior which appear later, in a species of genus *Homo* which evolved out of *Australopithecus*. The members of this ear-

ly species of *Homo* are the first humans—and the first killers.

A simple test of humanity is brain size. The *Hominidae* are well documented in the fossil record for the last three million years through two genera and at least three species. An increase of brain size is the most conspicuous evolutionary feature, as indicated in the following table of cranial capacities. The table includes genus *Pan*, the chimpanzee, for comparison.

	range
<i>Pan</i> (chimpanzee)	320-480 cc.
<i>Australopithecus</i> (ape-men)	435-600
<i>Homo erectus</i> (half-brained men)	775-1225
<i>Homo sapiens</i> (full-brained men)	1000-2000

It is clear from the overlap of brain size in *Pan* and *Australopithecus* that the ape-men required little more intelligence for their food getting than do chimpanzees. Indeed, the feeding habits of both are assumed to be rather similar, even though their environments differ.

The diet of the apes is vegetarian; they browse for seeds, fruits, leaves, young shoots, roots and new bark in a forest environment. A chimpanzee troop gets up in the first light of morning and aimlessly makes its rounds, nibbling, chewing and resting throughout the day, bedding down at nightfall. Each individual looks to his own quiet greed. There is no division of labor, no sharing of food. Members of the troop simply browse in each other's company.

Australopithecus lived on the

plains of East and South Africa and ate a mixed diet of fruits and roots on the one hand and on the other, worms, insects, frogs, lizards, bird eggs, small rodents and the afterkill of the big cats. The transition to protein foods involved no digestive adjustment on the part of the ape-men. Primates as a zoological order, from the beginning of their life in the trees in Eocene times, long were eaters of concentrated foods in the form of seeds. Besides, the living apes never turn down eggs, grubs or small rodents when they come upon them.

The ape-men pioneered a frontier in their feeding ecology. They moved into a neighboring landscape, the plains, out of the forest, with only a slight shift of emphasis in their diet.

Ape-men came to live in the home of the grass eating zebra and the zebra eating lion. The stock of large, herbivorous mammals was not at that time fully exploited by carnivores. There was room for more guests at the table. The space eventually was filled by the half-brained men, the first humans, in the Middle Pleistocene. By that time man had evolved his striding gait and the social and technical skills that were to make him a global hunting species. In the meantime, the African savannahs were occupied by the ape-men, whose feeding behavior represented a transitional from between vegetarian browsers of the forest and the human hunters. The ape-men ate meat. They even manufactured pebble-tools on the spot to butcher their finds. But they were not carnivorous hunters; they were carnivorous browsers.

This standard interpretation of australopithecine eating habits is at odds with Ardrey's. He favors the minority opinion of the ape-men's discoverer, Raymond Dart of the Republic of South Africa. Anthropologists everywhere pay Dr. Dart, now 10 years retired from his chairmanship of the anatomy department at the University of Witwatersrand in Johannesburg, the respect owed him for his recognition of unknown fossil material for what it was, an early hominid. His discovery ranks as the single most important event in the entire history of paleoanthropology. Everybody is more than willing to let the old gentleman play with his pet theory that *Australopithecus* stood up to adult baboons and clouted them with humerus bones taken from antelopes. Few take it seriously.

Modern man, with the added advantages of size, brain capacity and a stable two-legged stance—even if armed with a club—is hardly a match for a large angered dog. Ardrey expects too much if he thinks the midget ape-men could stand up to adult baboons, notoriously quick and vicious. The flashing of those huge canine teeth—fangs—in the male baboon is enough to put a famished leopard to flight.

Ardrey rightly calls attention to the small canine teeth in *Australopithecus*, but for the wrong reason. Australopithecine teeth are identical in form to those of modern men, if larger; the canine teeth do not protrude beyond the biting surface of the other teeth. The absence of fighting teeth in the jaws of *Australopithecus* is sufficient evidence for Dart—and Ardrey—that the ape-men carried

weapons around with them in their hands.

Now the reduction of canines in the hominid line is associated with the evolution of bipedal locomotion. It is probable that hands and arms freed from locomotor tasks took over some responsibility for defense. But they also took over the responsibility for peeling fruit, digging roots and transporting carrion. Teeth were left with one primary function—chewing. To assume that reduced canines resulted in the development of weapons is to put the cart before the horse.

The survival of *Australopithecus* must have depended on his ability to keep out of the way of predators, not on the strength to outfight them. In this, even lacking big canine teeth, the ape-men surely were no less able than baboons to cooperate in mutual defense—to signal the advance of danger, to huddle in superior numbers against it.

Against the plain evidence that the ape-men could not hunt, Ardrey has set round-about evidence that they could. From a number of cave sites in South Africa a great deal of debris has been removed. At Makapansgat this includes the fossilized remains of antelope (92% of the total) baboon (1.7%) and some few australopithecine fragments (.26%). No agreement is possible to get on epic conclusions based on this difficult material. Yet Ardrey has taken Dart's risky interpretation of it without reserve:—the ape-men lived in caves, brought killed antelope and baboons there, made clubs from the long-bones of the former and jaw-bones of the latter and with these weapons

killed more game. And each other, to judge from the fractured skulls.

The easy opinion of the cave sites is that they were not dwellings but refuse pits into which the animals fell or were washed after death. Caves tend to become bony junkyards for their inhabitants; yet extremely few australopithecine remains are found in them. Also, caves are dark, damp and dangerous. They need fire in them to be livable.

The ability to make, conserve, feed and handle fire is vital to the change from animal behavior to social conduct. Without fire, the social life of the hominids never would have risen above the level of baboons, who form associations only for mutual defense and sexual accessibility. Fire did four things for the humanization of man's family line: (1) it frightened off predators, (2) it gave warmth and light, (3) it cooked food, and (4) it provided a center or base-camp for the home territory of the group.

1. *Frightening predators.* What makes a cave desirable shelter for man also makes it so for wild animals. Man, did not inhabit caves until he could drive out competitors with fire. Controlled fire is the invention of *Homo erectus*, the genus of the half-brained men, whose hunting ability took them out of the tropical climate of their ancestors into the north-temperate zone. The earliest traces of man-made hearths come from caves, occupied by *H. erectus*, located near the January frost line in Europe and Asia. No traces of fire have been found in the open living sites of *Australopithecus* in Africa.

If no fire: then no hearth nor home. No home: no family life, no sexual division of labor, no humanity.

2. *Warmth and light.* Feeding the hearth fires must have been the task of women who stayed close to home for the care of babies and the collection of wild vegetable foods, while men went out on hunting teams. Returning home to the light of the fire, the men had their working day lengthened for the manufacture of tools and weapons. Night and day, these fires also kept back the glacial cold.

Man has no pelt to protect him against non-tropical weather. (He carries the same number of hair follicles as do the apes but his do not grow as much.) His nakedness probably evolved with the ape-men as an adaptation to the African sun, which drives the big cats and jackel packs into the shade for sleep. Hairlessness and upwards of 5 million sweat-glands go together as part of a mechanism that allows man to lose body heat rapidly. Covered with body hair, the carnivorous animals of the African plains would suffocate in their own metabolic heat if they went about in daylight; hence they hunt their prey in the cool of night, dawn, or dusk. Sweating evidently gave the ape-man a safe time slot in the ecological clock for feeding, an advantage that turned to a disadvantage for the first men to reach chilly climes unless they compensated with fire and clothing.

But fire had greater effect on man than merely warming his knuckles.

3. *Cooking.* Established fire led to cooking, perhaps accidentally,

as Charles Lamb has it in his dated whimsey of 1822, A DISSERTATION UPON ROAST PIG.

Lamb's pig got roasted in the burning ruins of a peasant cottage. But peasants and cottages go with a Neolithic way of life that does its cooking in water-tight, fire-proof containers of pottery. Roasting is the older, Paleolithic method; it must have persisted until the advent of agriculture a scant 8 or 10 thousand years ago when a new source of food, domesticated grain, called for a new method, boiling.

But Lamb's guess that roasting was discovered for the benefits of flavor is as good as anybody's. After all, it is the side effects that are notable. Cooking meat breaks down tough fibers, releases nourishing juices, and even reduces complex organic compounds to simpler ones. With cooked food, digestion begins with mastication, a great time saver.

It is no accident that human jaws begin to get smaller from the time fire entered his domestic life. The ape-men, like the forest apes, must have spent most of their day in mechanically breaking down their uncooked food between massive teeth set in huge jaws. Likewise, all that half-digested mess, when it reached the stomach, must have put the ape-men in a torpor, so that their diurnal cycle was an endless round of sleeping and eating.

One benefit of cooking is a crowded time schedule which allots intervals for eating, tool making and ceremonies. The intelligence for these human activities evolved with a bigger brain made possible by a smaller face; no longer did heavy

temporal muscles, serving powerful jaw compression, constrict the brain box and limit its expansion.

Cooking carried man into human status with more than a refined sense of taste for roast pig.

4. *Base-camps.* Hunting is a social activity of males conducted out of bands of families who share food together. The ape-men were no more capable of food sharing than they were of allotting a different work schedule to each sex.

Fire slowed down nomadism and created a home territory. The ape-men moved around everywhere with no sense of territory except for the immediate space around them. Contact between troops must have stimulated retreat or indifference, as it does among the living apes.

Men from different families, even different bands, could plan and work together to bring down game bigger than themselves. Troops of ape-men each went their own way, collecting and eating as they went, concerned only to avoid mutual group contact.

Fire intensified the sociability of people. They were brought together around it at night where they could see each others' faces in the flickering light, talk about or act out what they did during the day, plan for the next hunt, and arrange for the exchange of women with neighboring bands. Marriage exchange was the basis of economic cooperation between bands and the basis of political strength within tribes of bands. Tribes might fight, but aggression against "they" took teamwork among "we."

All such communications were denied the ape-men in the absence

of fire, which focused the intimacy of face-to-face relations to the intensity needed for language. If the ape-men had no means of communicating a sense of "we," they had no means of conflict with "they."

Fire is an open and shut case for human status and for the organized, cooperative methods of human killing—the killing of game or of each other. But Ardrey makes no mention of fire whatsoever! He has a nice theological point to uphold. He must have his Able for Cain to kill out of pure unregulated springs of bestial aggression. Here Ardrey follows Dart in making two brother species of ape-man, one carnivorous (Cain) and one herbivorous (Able). Why the latter, if he is an innocent plant eater, is found in association with butchering tools used by the former is not explained. Of course, the differences in size and tooth structure which are here divided among two species may just as well be assigned to the range of variation within a single species. Besides, the real killer of the australopithecines whose battered skulls Ardrey blames on fratricide is known in the person of *Homo erectus*. The same success of the first men which spread them all over the Old World outside of Africa brought them back there to swamp the last remaining pockets of the ape-men.

The Cain and Able fantasy dissolves, before a case of humans exterminating a species of lower animal that got in the way.

Ardrey blames for harsh brutality an animal too feeble and brainless

for the job. The verdict for the ape-men must be—not guilty!

Indeed, had the ape-men been given to the feats of aggression assigned them by Ardrey, the line of evolution to man would have been shut off then and there. The fact is that the forms of economic and political cooperation the first men evolved were extensions, in a new direction, of some form of mutual defense required by the ape-men. Had the ape-men been fierce and dominating creatures, there could have been no chance of shifting from cooperative defense to the cooperative challenge of getting at food resources available only through team hunting.

Darwin himself, without a shred of archeological evidence, predicted the behavioral characteristics of man's primate ancestors. In concluding *THE DESCENT OF MAN*, he observed that:

It might have been an immense advantage to man to have sprung from some comparatively weak creature.

Darwin most emphatically was correct.

Ardrey wants to shock people into recognizing their animal heritage. This Huxley did sufficiently well for all time at the great Oxford debate. For Ardrey, the real thing is not shocking enough. But no amount of horror mongering can recast our humble ape-man grandfather into the grisly role of a blood-thirsty, war-making punk version of King Kong.

The End

BRIAN W. ALDISS

LONDON and OSLO LETTER

I was sitting in an old hunting lodge, eating reindeer steak followed by cloudbberries, a delicious sort of golden loganberry which grows inside the Arctic Circle. Outside, distantly, Oslo lay at the end of its fjord, fringed by dark forest.

What connection has all this with science fiction? Everything! For one thing, I was lunching with Torolf Elster; for another, it was SF that brought me to Norway in the first place.

By European standards, Norway is a big country, but its population numbers under four million. Nobody would be crazy enough to claim that all those Norwegians are about to be converted to SF en masse; but certainly the feeling is that SF is in an emergent phase. If it emerges at a more responsible level than most countries have managed, this will be partly due to Torolf Elster.

Elster is a writer himself, and has written SF. He has a sound knowledge of the genre. A distinguished, rather bear-like man, he is now Head of Programmes in Norsk Rikskringkasting, the Norwegian Broadcasting Company. He had commissioned me to write five scripts on a critical-historical survey of science fiction, and has generally given a good deal of air space to the subject.

I was also in Oslo to speak to the Norwegian Students Association on

SF. I have no Norwegian, unfortunately, but their mastery of English is exceptional. One of my guides and friends during my stay was Jon Bing, a young writer who is translating my broadcasting scripts. Bing and his buddy, Tor Ag Bringsverd, have had a joint volume of SF short stories published. Tor Ag has gone down to Majorca with his wife on the proceeds, so I could not meet him.

The Norwegians are great people. Bing is a fabulous character. He took me to a session of Aniara, the Oslo SF group; I was startled to find how much like a British group it was—even down to the fridge full of beer!

The guys were complaining about the dearth of SF in Oslo, although I noticed the leading bookstores had a fair display of paperbacks; Ace was well represented. They were especially interested in Ray Nelson, who once passed through Oslo, and in Poul Anderson, whom they suspect of being part-Viking. The local Heinlein-addict arrived late; he had been singing in a pre-Christmas performance of Handel's "Messiah".

I was sorry to have to travel on to Sweden, but there I met more pleasant people, including Goran Bengtson, who is in Radio and TV, and Lars Gustafsson, a philosopher with several books to his credit.

Both came into the category of

people like Bing who, once met, are never forgotten. Both, oddly enough, are compiling anthologies of SF for the Swedish market. Both are so fastidious in their choice that the work has been in progress for some years!

Bengtson and I visited Stockholm's SF fans—a rich and well-read group which includes a young writer, Bertil Martensson, whose first novel has just been accepted for publication in both Sweden and Denmark.

Gustafsson lectures at Uppsala University and edits a literary magazine. We sat and talked for a long while in the cozy bar of the Opera House, while snow fell outside. We mainly discussed Time and the way we identify different time-flow rates without officially recognizing them. We agreed that a soft watch which could register subjective time would be a useful invention!

Flying on to Copenhagen, I stayed with another striking personality, Jannick Storm, the doyen of Danish SF and editor of a SF series that begins this year with translations of novels by Dick and Ballard.

Although Norway, Sweden, and Denmark are very much individual countries (the Norwegians say gloomily of the Swedes, "Their problems will be ours in five years," much as the British do of the Americans), their culture is a common one. Jannick Storm's name was well-known in each country.

He introduced me to the jovial Sven Christer Swahn, whose name

I had also heard on my travels. Another writer, another great drinker! My time in all three capitals was too short, but at least I made a number of friends I hope to revisit as soon as possible. I'm also hoping to produce an anthology of Scandinavian speculative fiction, but the translation problems are not too easily overcome.

Small populations mean publishing difficulties for the Scandinavian countries, highly literate although those populations are. The compensations are that categories are less easily established than in—for example—the States and Britain. So SF means a wider thing there than it does to us. This is well exemplified by the Norwegian prize-winning "Epp" by Axel Jensen, a grim-funny novel that manages effortlessly to be both mainstream and SF.

The advantages to an author of a wide-reading audience are, I would think, obvious. We may never get a great bulk of SF from Scandinavia, but what does appear should be of high quality. "Epp" has already been published in translation. "Termush", by Danish author Sven Holm, may appear soon. Both are well worth watching for.

I got back to London just in time to appear at the National Film Theatre on an SF panel with Arthur Clarke, John Brunner, and French film director Pierre Kast. It was Clarke's birthday—but how we celebrated that event is another story . . .

Don't Miss

**A BERTRAM CHANDLER'S NOVEL SPARTAN PLANET
IN THE MAY FANTASTIC**

NOW ON SALE

THE FUTURE IN BOOKS



QUICKSAND, by John Brunner
(Doubleday, \$4.50)

reviewed by
ROBERT SILVERBERG

A good case could be made that this fascinating and moving novel is not science fiction at all, but simply the record of two psychoses (one developing, one full-blown) that happen to partake of science-fictional components. That is, it may be that the insistence of Brunner's charming heroine that she comes from the distant future is merely a delusion, and that the gradual sharing of that delusion by the main protagonist is no more than a facet of his own mental deterioration. It does not matter. The novel holds one; it convinces one of the earnestness of its characters in their predicament; it works as a piece of fiction.

Not without major flaws. The book is told entirely from the viewpoint of a youngish British psychiatrist named Paul Fidler, whose life is a considerable mess: he is stalled in his profession, has a howling bitch of an adulterous wife, is surrounded

at work by incompetents and time-servers, and is haunted by fears of the return of past mental illness. Unhappily for us, Brunner portrays the man as a whiner, complainer, self-criticizer, lamenter; through the book runs a grumpy interior monolog in which Fidler assails himself for his plight. Every line of it could have been cut with no loss to the book—and with positive gain.

Then, too, the proportions are awry. The book opens slowly (too slowly) but, with the arrival of a mysterious and alien nude girl, found wandering in the woods and taken for mad, the story becomes a compelling and cunningly crafted unfolding of discovery and mutual involvement. The details of day-by-day routine in a mental institution are so convincingly done that one suspects skeletons in Brunner's own closet; the tortuous path toward communication between Fidler and his strange patient is beautifully drawn; each of Fidler's steps into the quicksand that ultimately engulfs him is carefully prepared and

wholly believable. His impulse to heal leads to a desire to learn, and then into unpardonable professional breaches committed for what look to him (and us) like perfectly valid reasons.

All this is quite superb, and the depth of Brunner's character-drawing is impressive. When these people are in pain, we feel it; and we share their joy as well. But about page 220, just when the story should be entering its richest phase, the author evidently remembered that he had already written some 60,000 words and ought to be thinking about bringing his story to a close. And the final twenty pages are a synoptic jumble in which key events happen off stage, important revelations are thrown in as afterthoughts, and the ultimate plot reversal is bluntly flung at us in four pages of sudden interior narrative. That final section could have been unbearably poignant if Brunner hadn't skimmed it; as it is it's a cause for regret.

Despite which, the novel reveals Brunner's now quite highly developed eye for character, and for the most part is told with his customary cool competence. Flawed or not, it offers rewards. Rumor has it that Brunner's next novel is 200,000 words long; and if it carries forward the display of skill shown in *Quick-sand*, without showing the signs of fatigue or haste that mar the close of that book, it should be something extraordinary.

A TORRENT OF FACES by James Blish and Norman L. Knight
(Doubleday, \$4.95)

reviewed by

LEROY TANNER

Your editor, who in most other

ways tends to be rather reasonable, considers my reviews to be overdemanding, supercilious and—in fine—bitchy. He passed along a strong hint that if I were to continue benefiting by the new dollar-to-pound exchange rate I had better find something nice to say about something. This is rather hard to do because most of the SF that sweeps into my study is so much varicolored trash. Tanner's law—as opposed to Sturgeon's law that states 90% of everything is crud—is that 95% of everything shares that putrescent condition. However, I have heard the word from the mount, and I have searched diligently and have found a book which, while not an unqualified success, certainly has a bit of meat on its bones.

This is an old fashioned book about the future, and this factor is both its strength and its weakness. For those of us with a sympathy for the good old, solid fuel, SF days, this novel will come as an unexpected treat. Here are the great gobbets of solid copy that tell us more about the overpopulated world of 2794 than we would normally care to know, 270 pages of shoulder-to-shoulder population problems. And, even in all these fine print pages, the characters have little time to develop because so much is happening. If, truth be known, the amount of detail and plot could have carried a book twice, or ten times, this length. But we can sympathize with the authors' problem; finish the thing now or die in the saddle. They are obviously gentlemen who bring out the best in each other when it comes to pyramiding detail and technical construction and who

worked on this novel for nineteen years! I hesitate to say that they bring out the mutual worst in each others style or writing technique: since I am under orders I shall say only that they do not appear to have much of a beneficial affect one upon the other.

But—may I be generous once in a bilious and irascible lifetime? The virtues outweigh the faults and you may never again see a novel of science fiction within which there is an imaginary world so intricately detailed and fleshed out. I do not believe for a single instant that this civilization could possibly ever exist, but I had a wizard time willingly suspending my disbelief and chuntering along in it for a few hours.

THE AMSIRS AND THE IRON THORN by Algis Budrys (Gold Medal, 50c)

Yes, this is Tanner again, enjoying the unaccustomed pleasure of two reviews in a single issue. The reason for this being, I suspect, a certain sadistic impulse on the editor's part to see what might happen when a critic is faced with a fellow of his own class. I approached this offering with a certain amount of trepidation due to the fact that its author appears to be a man of intense feelings and bitter moods, as well as being a reviewer of books himself. However I have always enjoyed a singular capacity for making enemies ever since my public school days, so I am well aware that I am exercising that talent to its utmost when I state that, as a reviewer, Mr Budrys is a pompous liar.

For some reason, unbeknownst

to me, he seems to hold a measure of hatred for the two gentlemen who edited NEBULA AWARDS STORIES TWO (Doubleday, \$4.95) and has exercised that emotion in a review printed in a recent issue of, that otherwise fine journal, GALAXY. I am shocked that a member of our profession should behave so uncivilly. Proof? I have but to quote Mr. Budrys' review: "[this volume is] Self-conscious, saddled with primerous blurbs and introductory matter, it is so sophisticated, so scrupulous in crediting even the supplier who manufactures the Science Fiction Writers of America's Nebula Award tokens (sic), that it resembles some kind of grotesque attempt to literatize a corporate statement. Fortunately, it is filled with good stories . . ."

All of the above nonsense comes apart rather easily and leaves a revolting mess on one's hands. To begin with, there is no such word as "primerous", and it behooves a critic, even an unskilled novice such as Mr. Budrys, to be acquainted with the language he is attempting to criticise. Secondly, the "introductory matter" apparently consists of a single page of introduction, while the "primerous blurbs" are all of five to ten lines long. To refer to the book as being "saddled with" these few hundred words of, frankly, innocuous copy, is an exaggeration to say the least. As to the quality of these same items, they appear to me to be no better or no worse than those in any other anthology—so I wonder what the reviewing gentleman was becoming so excited about? I am even more confused by the fact that he was forced to lie to make

his next point. There is no mention in this book of the supplier of the beforementioned "tokens" —hand-some objects that others call trophies —however I did find Mr. Budry's source of information on the fly of the dustjacket. Oh dear. . . Now he surely knows, goodness, *everyone* knows, that incompetent creatures penned in publishers' basements compose this jacket copy, and that authors have no knowledge of it whatsoever until it appears in print.

Confusion deepens with the discovery that these evil—blurb and introductory matter defiling—anthologists have filled the book with good stories. The final death blow to reason is delivered when one realizes that the argument in the final paragraph of the review is not Mr. Budrys' at all, but has been lifted bodily from the Afterword of the book, written by these same sophisticatedly degenerate anthologists, taken without credit being given—or the admission being made that there even is an afterword in the book.

Well, as the actress said to the bishop, enough of that. Since Mr. Budrys is now a proven incompetent as a reviewer, let us see what kind of a novelist he is. I have always believed that, at his best, he was a damn fine writer, so therefore approached his book with a feeling of enthusiasm. The opening is masterful, with a wickedly realistic alien setting where the details of existence are stark and strong. I believed in this struggling little human community battling against the hideously beautiful Amsirs. The author builds a wonderful con-

struction in the opening chapters—then proceeds to carefully destroy it piece by piece. By page 112 I realized that he was attempting to be funny, though this attempt is an embarrassing failure, and soon later found out that it wasn't a novel at all but was some specie of puzzle. Apparently the book has something to do with Tarzan because, when the hero meets the Earth people, he introduces himself as Jackson Greystoke, which is not his name. Further evidence for this assumption can be extracted from a review Mr. Budrys wrote of his own book in which he referred to it as, "The story of a young man raised by apes on Mars." I detected a strong whiff of the old allegory here because in the book they are people—not apes. The ending reinforced this by tapering off into nothingness with a hint that the story was beginning all over again in the manner of a literary snake with its fangs sunk into its own tail. I am afraid that I must admit to a lack of comprehension as to just what this was all about, and my doubts are reinforced by the author who, in his review, said, ". . . [perhaps] you won't understand the ending of the book. I take all the blame; I should remove the marbles from my mouth." You should indeed, sir. And after you have discarded your saliva dampened agates, and wiped your fingers, I would suggest that you harken to the words of the Master, Herbert George Wells:

"I write as I walk, because I want to get somewhere. I write as straight as I can, just as I walk as straight as I can—because that is the best way to get there."

To you readers I say, buy Mr. Budrys' earlier novel published, I believe, by the same firm entitled ROGUE MOON. This is a soundly written and excellent novel and well worth its price. I am unhappy to report that THE AMSIRS AND THE IRON THORN is not.

ASIMOV'S MYSTERIES, by Isaac Asimov (Doubleday, 1968, 228 pp., \$4.50)

reviewed by

POUL ANDERSON

This book is by Isaac Asimov. Need I say more?

Well, at least it is customary to give the reader some idea of what awaits him. Here we have the author's short science fiction stories of mystery and crime gathered between one set of covers. It is debatable whether his novel *The Caves of Steel* originated this form. Hal Clement's *Needle* appeared a few years earlier. On the other hand, Asimov brought it to perfection, and he has delighted the world with more of it than any other writer. Classical science fiction and classical mystery fiction have much in common. The lit'ry critics dismiss them as "unemotional," which only goes to show that lit'ry critics have never experienced the intense pleasure of concentrated, disciplined thinking. Undeniably, though, these genres appeal more to the cerebrum than the thalamus. They are both essentially melioristic, implicit in them the assumption that intellect and good will can solve all important problems. In their purest forms,

they both give the reader all clues—to "Who did it?" or "How do we get out of this mess?"—and challenge him to come up with the answer before the hero does. Despite such similarities, it is extraordinarily difficult to combine them, their separate demands are so rigorous. Asimov does it repeatedly, with skill and grace.

Not that he is confined to strict classicism. In fact, he seems to prefer the reverse type, in which you see the crime take place and afterward watch the detective unravel it. Most of the Wendell Urth stories fall into this category.

From there, he goes on to straight tales of felony, which range from the light-hearted "A Loint of Paw" to the chilling "Obituary." You also get "Pâté de Foie Gras," wherein no laws are broken except, seemingly, one of nature's, and you are invited to tackle the matter of the Goose that laid the golden eggs. Incidentally, this one is as good a view as the non-scientist will ever have of the foot-slogging real-time operation of science, down on the laboratory level where it counts. Don't let that scare you; it's a lot of fun too.

As frosting on the cake, you get the author's introduction and his occasional comments on individual items. It's almost as pleasant and revealing as a conversation with this genial, gentle, informed, and enthusiastic man. Isaac Asimov has come a long way from our not terribly popular field, but he is too big to forget or demean his origins.

or so you say...



Dear Editor,

I am, to say the least, very pleased with the policy you have set up for AMAZING. I am pleased that you have renewed the letter column.

I think because science fiction is such an unlimited field that writers have tended to limit themselves, whether they are aware of this fact or not. I think that what a lot of new writers are trying to do is break out from this shell. In so doing some of the attempts will be bad, a lot will be good. It took me a long time to acquire my taste for Ballard because his style is fresh, vastly different, and wonderfully strange when you get to know it.

This is why sometimes I like a new writer's story over one of the more experienced writers. That is why I absolutely admire Delany. He is fresh and new, his characters are wonderful, more fully realized than some of the classics. Lobey I can never forget, because he is so completely there. I love all that Delany has done, am waiting with a form of madness which I have labeled Delany Madness, for his next novel.

Nicholas Grimshawe

Then AMAZING will only add to your madness. Delany's *HOUSE A-FIRE*, which appears in this issue, is part of his new novel, *NOVA*, which will be published by Doubleday later this year.

Dear Sir:

When it was announced at the recent SF Convention that Amazing would acquire a new editor, my swollen, fibrillating heart did a little cardiac dance inside my chest. At last SF would again have a third legitimate market—thereby expanding my *own* horizons by one-third.

The stories in the issue at hand (Feb., 1968) are good—particularly Katherin Maclean's *The Trouble with you Earth People*.

Of the features, Leon E. Stover's article *Neanderthals, Rickets and Modern Technology* struck me as being, overall, the best thing in the magazine—fact or fiction. It's similar to, and better than, the *Analog* "Looka what the Establishment's doin' to me now!" factual/farcical articles, but entirely without the emotional nonsense that often accompanies them. This feature should

definitely be continued—I only hope the editor will decide that the stories must keep pace with the science, and allow more work from year 1968 to permeate the magazine. Let's face it: Amazing 1929 has little to say about modern problems—either technological or psychological, sociological or personal.

Overall, Amazing is beginning to look as if it really wants to succeed—realizing, finally, that the only way to attract an audience is to talk directly to it, about its own problems, and not about caricatures of sand in a desert of infinite monotony.

P.G. Wyal

Dear Mr. Harrison,

Since you do not intend to hide behind the editorial "we" I will write this directly to you.

When I saw the December issue of AMAZING STORIES, I was going to pass it over in favor of some new science fiction while thinking to myself about how great the magazine used to be. Then I noticed that the cover had a new look and a new editor. It even had some new stories! So I bought my first issue of AMAZING since my subscription ran out in 1966. You didn't state your new policy then and quite right so I waited until I saw what you intended to do before I made up my mind.

Today I bought my first issue of FANTASTIC in quite a while. I agree with you 100%. Science fiction has been rather dull lately. As you say, the fun has gone out of fiction. The so-called "sense of wonder" is practically extinct. AMAZING and FANTASTIC were my favorite magazines

for several years. Unlike the old veteran sf readers of the thirties and forties, I feel that the "Golden Age" of AMAZING and FANTASTIC was from 1960 to early 1965.

What was it that made them my favorites then? Well, for one thing they had the best letter columns around. The letters were neither scientific theses or essays on sociology in science fiction. Also, the editorials were at least interesting, not opinions on Viet Nam or trite "look at how great we are, winning whole bunches of awards and such." They were about science fiction and for science fiction. Of course, the best part were the stories. Stories that were about people without being psychological and about science without getting involved with equations. I nearly forgot the great features such as Sam Moskowitz's Profiles and Ben Bova's articles on Hoaxes and Extraterrestrial Life. I would like to see all these things again but it will be hard since there are no existing models to go by anymore. AMAZING and FANTASTIC were the last of that breed and it looks like it will be up to these magazines to revive it. If you succeed, maybe you will get the award named for the man pictured on your inside cover. I hope so.

"Stories that move, that entertain, that captivate." That's a tall order, and if you deliver you'll have an old subscriber returning to the fold. Can we expect an addition to your masthead saying "All stories new"?

George Inzer

Very few voices have been raised in favor of a complete reprint maga-

zine, so now at least half this magazine consists of new material. Where we go from here depends on the readers, many of whom find that this is the only way that they can read the best of the old stories.

●

Dear Harry:

Science fiction book-reviewing in the SF magazines has just hit a new low (besting a previous mark set by Henry A. Bott) with LeRoy Tanner's assinine review of Roger Zelazny's *Lord of Light*.

Rarely have I seen incompetence so publicly demonstrated by a reviewer. You gave Tanner one of the most important books published in the SF field in 1967. *Lord of Light* is one of the finest jobs of mythic-story telling I've ever encountered. I have my own criticisms of the book (I think the flashback-effect of placing the penultimate chapter first is unnecessary; I thought the battle scenes were weak; I regretted the fact that Zelazny never took us inside any of his protagonists for an interior view), but they are insignificant in comparison to the book's virtues. These include a fantastically whole and compelling myth-structure which is only loosely based on the Hindu pantheon, viewed with the dual sense of history-in-the-making and myth-being-torn in which no other writer approaches Zelazny. There is a quality of *tour-de-force* to the book. The Zen sermon in Chapter One is magnificent. And, despite the exterior view, the protagonists—most particularly Sam—become vividly larger-than-life. The ending moved me to tears. Like others I

know, I wanted to begin reading again, to repeat the cycle.

But *Lord of Light* is a difficult book. Zelazny begins his story and develops it with no guide-lines for beginners. There is much that can be bewildering in the complexity of names, the allusions to a past the protagonists know, but the reader (at the beginning) does not, and even Zelazny's occasionally (but deliberately) baroque style. Clearly, the book made to many demands for either Tanner or his "colleague," C.C. Shackleton, "who kindly consented to read it on the spot" (magnanimous fellow!) "although he dropped it into a coal hod before he finished a chapter" (no heavyweight reader, he!). What an ass! What asses! Shackleton hasn't the patience to read the first chapter before giving it up and delivering himself of his Judgement. Tanner, faced with writing a review of a book he patentlly couldn't read, much less understand, contents himself with a review devoted to quibbling with a handfull of phrases ripped (conveniently) from context.

Compounding his crime, Tanner delivers himself of the judgement that "The author undoubtedly has a tin ear for the meanings and nuances of language"—betraying his total ignorance of Zelazny as a writer. Tanner seems to have a much tinnier ear. He devotes a long paragraph to his annoyance with a character who "refers to a holy whorehouse as a 'Fornicatorium.'" That the character is a product of a culture set on an alien planet many centuries in our future is lost on our Mr. Tanner, who then spends a great

deal of space on the Latin, *vomitorius*, and *fornicatus*, all in blithe ignorance of the fact that *vomitorium* may not have been uppermost in Zelazny's mind when he had his character make the pun—after all, “auditorium” or “emporium” is as likely in the context, and puns have very little in common with Latin cognates.

If this rampant pedantry was not enough—and it wasn't—Tanner goes on to quail at “the one-sentence paragraphs which stud the book like carbuncles—five in a series at one point.” Horrors! Is there, somewhere in Tanner's no doubt vast library of textbooks on Correct Writing, a passage forever forbidding the use of one-sentence paragraphs, most particularly one after another?

What kind of criticism is this? In a book of around ninety-thousand words, Tanner has managed to unearth a few perhaps clumsy phrases, a word (a pun!) he doesn't like, and the existence of one-sentence paragraphs. He manages to say nothing of the book's content at all! Indeed, he demonstrates not only pedantry, but *errant* pedantry, when, after quoting several phrases of Zelazny's, he states “This man has unenviable talent for *inventing* clichés.” A cliché, Mr. Tanner, is a phrase which is at once so apt and persuasive that it becomes the coin of everyday conversation and is over-used to exhaustion. Rather like “stud the book like carbuncles”, you might say. (Do

carbuncles ever do *anything* besides “stud”?)

Bad, bad, bad. Tanner chooses only to criticise Zelazny as a prose-smith, and then demonstrates he can't even use words correctly himself! I don't know where you dug this creep up, Harry, but I think he's best reburied. The stench of him is stinking up your (otherwise vastly improving) magazine. With many regards,

Ted White

Mr. Tanner has asked me to inform you that there is only one “s” in “asinine”, and that he likes you too.

•

Dear Mr. Harrison:

I'm not an official spokesman, we have no organized fan club on campus, but I would like to say thanks from the four or five of us here who read science fiction and talk about it. The feeling is pretty much in agreement that the “new” AMAZING is livelier and more interesting, both in the fiction and the departments. The Tanner review of LORD OF LIGHT was a revelation since I had been discussing just that and the uneasy feeling it gave me. This review told me why.

Charles Mann
San Diego

Mr. Tanner says that he likes you too, even a bit more than he likes Mr. White.

(Continued from page 5)

story where standard props like starships, sub-lights, blasters and such are rearranged to make new stories. Totally meaningless stories, lacking in wit, thought, or any entertainment values—other than inadvertant ones—and substituting violence for plot.

There are also some warning signs that must be heeded. Writing is communication first, everything follows after that. Without communication nothing else matters. We should applaud writing experiments such as GILES GOAT BOY and the William Burroughs clip-and-paste constructions. They are important landmarks because they show us what *not* to do. I do not say that the reader should be spoon fed pabulum, he may have to work once in awhile to get to the kernel of a story, but I do say that deliberate devices to destroy communication do just that. See them and beware. Look at the frightening example of James Ballard and see what can happen. His latest works are almost unreadable and incomprehensible, the direct opposite of his earlier magnificent efforts. In addition he, from his reviewers seat in the GUARDIAN, adopts a holier than thou position that declares the whole world is wrong—except for him. He thinks

that a writer's organization—like the Science Fiction Writers of America—is bad because it helps the writers financially rather than helping their souls. He divides up SF writers into imaginary "old-guard" and "new writers" categories and proceeds to blast his old friends for impossible crimes. Not only are these acts personally reprehensible, but they import a literary quality into SF that we can very well live without. Ivory towerism. "I'm great, an aesthete, better than you common clods and I have a direct wire to Upstairs that gives me the true word."

As an American general once said, NUTS! We may have our heads in the clouds, but, by God, our feet are firmly planted in the mucky pulp magazines from whence we sprang. Let us have literary values, by all means, but let us also keep a sense of proportion. Communicate or die, that's the message.

A piece of fiction that does not carry some message to the reader—other than confusion—is worthless. It would better be carved as a grafito on a jakes' wall. At least there it would be guaranteed of a rotating audience until it was painted over.

Harry Harrison

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